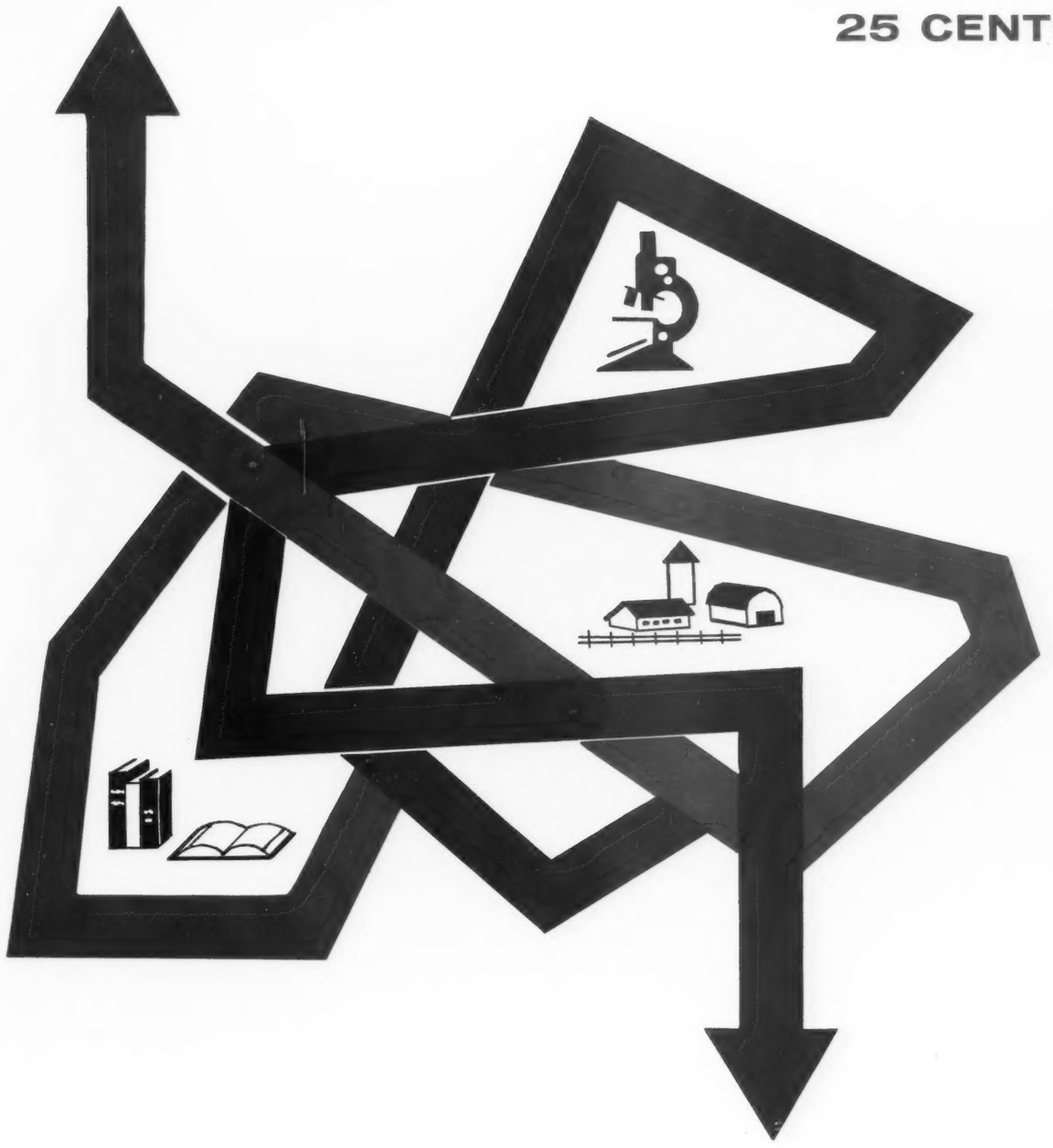
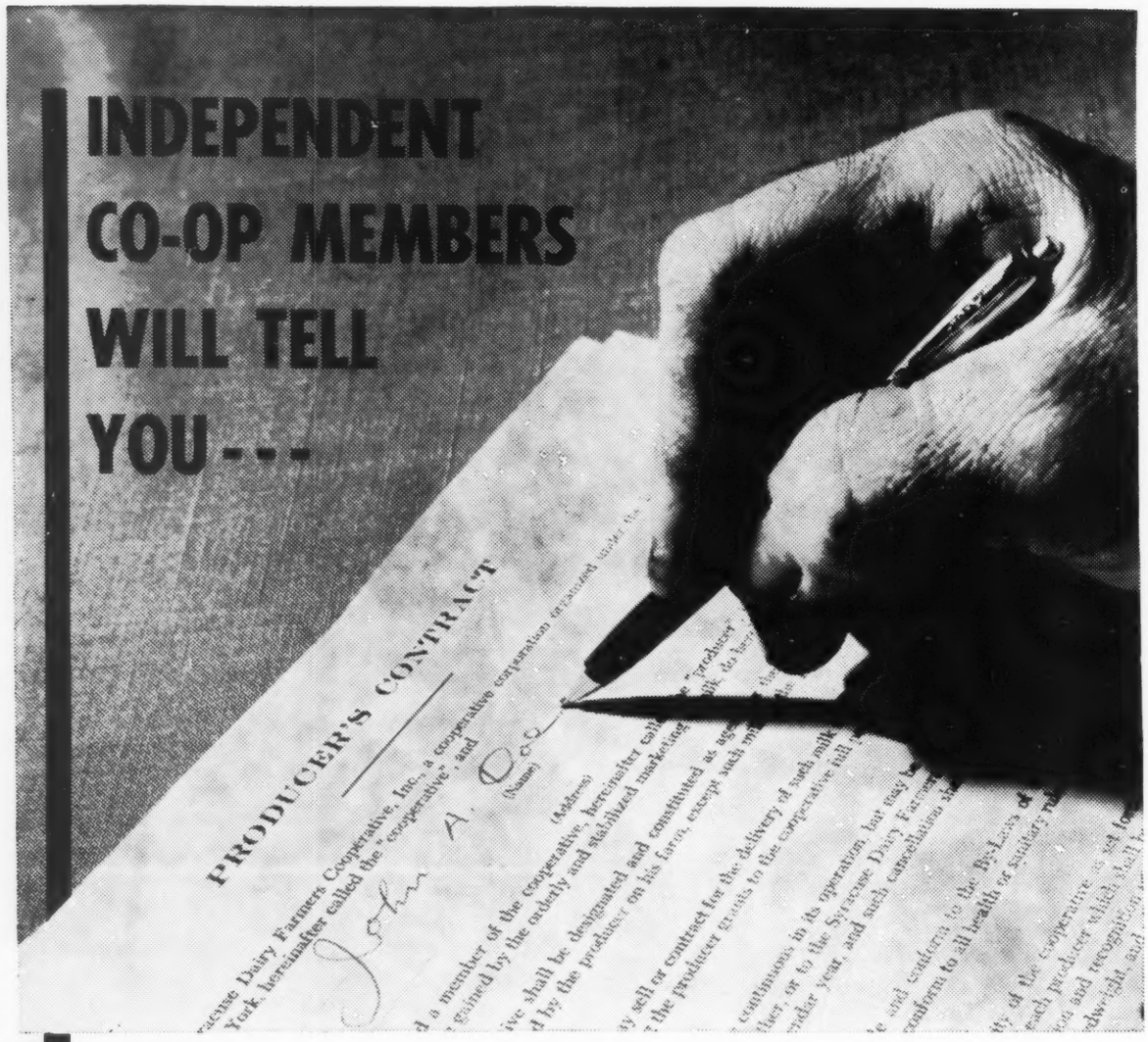
CORNELL COUNTRYMAN

MARCH 1961
25 CENTS



GREAT ISSUES IN AGRICULTURE



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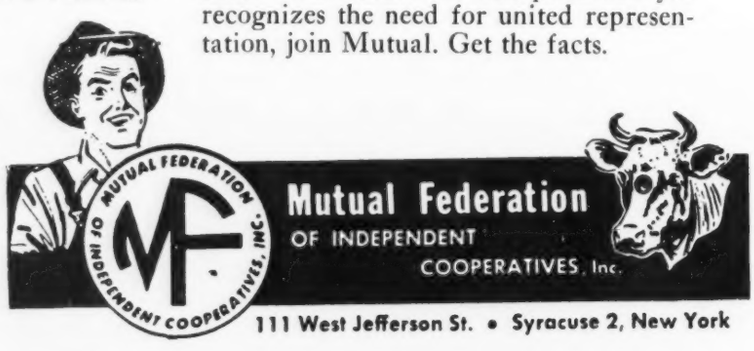

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AMERICAN AGRICULTURIST

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Ithaca, New York

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Starch Continuing Survey On Request

A Look at Farm Progress

G.L.F. takes this opportunity to salute Cornell on the occasion of its 1961 Agricultural Progress Days, March 21-23.

Those of us who have become so accustomed to think of the time as Farm and Home Week may lapse occasionally and make reference to the old name, but it will be a slip in name only.

Certainly the new title is definitive. Agricultural Progress Days provide the showcase where farmers can see the things that are happening or about to happen in their business of farming.

And things are happening. Mechanization, to be sure, but mechanization is only one part of the long-time drive toward more efficient farm production. There are other vital elements—breeding, to develop cows that will give more milk, and corn that will produce bigger yields. Nutrition is part of it. So is control of plant enemies, weeds, bugs, and diseases. It gets into how to plan a barn, how to handle materials more efficiently.

The leadership for these advances has been provided in large measure by agricultural colleges like Cornell, a fact which is quite evident to people in G.L.F. who have worked over the years in association with the people at Cornell toward one goal . . . a more prosperous agriculture.

Cooperative G.L.F. Exchange, Inc.
Ithaca, N. Y.

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Cornell Countryman

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IN THIS ISSUE

From The President's Desk 4
"Our Dynamic Agriculture" 5
Agricultural Progress Days Highlights 6
Dispensing with the Dispensible 7
We Sensed an Urgency for Progress 8
Audio Ornithology 10
Great Issues in Agriculture
- Secretary Freeman: The Goals of U.S. Agriculture 14
- The Research—Surplus Conflict 15
- Changing Role of Extension 16
- Paradox of Student Enrollment 17
- Farmer in the Suburbs 19
- Farm Power in the Market Place 20
- Farm Surplus—Its Cost and Cure 21
- The Changing Family Farm 22
- Trainning Americans to go Abroad 23
- Milk Quotas—Dairymen Must Choose 25
- Freeing the World From Hunger 26

Soviets Back Up Their Farm Drive with Massive Propaganda 28
You Wear Your Ego 32
Dairy Marketing and the College of Agriculture 36
Cornellians Recall B.A. 37
The "Super" In Our Supermarkets 41
The Thankful Heart 42
Editorials 43
From the College Press 44

Cover story—The design, composed of a black and red line intertwined into a knot, is symbolic of conflict and depicts the theme of this Agricultural Progress Days issue—"Great Issues in Agriculture." In the grip of the knot are the symbols of extension, resident instruction, and research—the three areas in which the College of Agriculture endeavors to resolve these "great issues."

The interpretation comes from the drawing board of Miss Sirje Helder, a 1960 graduate from Pratt Institute, Brooklyn, with a bachelor of fine arts in advertising design. Miss Helder is presently employed as a graphic designer by Fred J. Brauer, Inc., Industrial Designer, New York City.

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From the President's Desk

I take pleasure in welcoming guests of the New York State College of Agriculture to Cornell University's annual Agricutural Progress Days.

"Our Dynamic Agriculture" is an especially appropriate theme for this event in view of the vast changes taking place in agriculture — changes to which Cornell is proud to have contributed through teaching, research and extension work. But even greater change lies ahead as agriculture faces the great dilemmas of the years ahead.

The problems which face us on a state, national and international level are huge. New York State farmers compete with producers from other areas as never before for the great eastern markets. Nationally, we have an overabundance of certain foods, an unequal return to the farmer on his investment and other equally pressing economic and political problems. Internationally, we are concerned with feeding the world's billions.

If these problems are to be solved, all of us in the field of agriculture must see that it continues to be dynamic and progressive. It is our belief here at Cornell that the problems can be solved and our hope that Cornell may continue to play a leading role in meeting the challenges before us.

Deane W. Malott
President, Cornell University

"Our Dynamic Agriculture"

by Charles E. Palm, Dean
College of Agriculture

ETI

MODERN agriculture is America's greatest business and the many factors that have promoted dramatic progress in the past have opened up great possibilities and challenges that range across the broad complex of modern agriculture.

With the striking developments that are taking place, consider the changes in our agriculture. Many operations formerly carried out on the farm have "spun off," and now are a part of the agricultural businesses taken from the farm through processing, marketing, and ultimate distribution to the consumer. It is this total complex of the farm and the business associated with it that comprise modern agriculture.

In this context, agriculture employs about one-third of the gainfully-employed men and women in the United States, whereas farming alone requires slightly less than 10 percent. All phases of agriculture offer many wonderful opportunities for useful and satisfying careers, regardless of one's interest—farming, farm machinery, dairying, food processing, the biochemical laboratory, farm credit, food distribution, international shipment of agricultural commodities, teaching, research, or extension. These and many other phases of modern agriculture afford competent men and women careers for outstanding service and a profitable future.

New York State's agricultural economy is strong and varied. Our farms produce commodities worth nearly a billion dollars annually. Dairy and livestock farming account for 72 percent of our farm income, with a variety of crops providing the remaining 28 percent. The agri-businesses associated with the farm add billions of dollars to the total worth. Consumers in our State, in turn, pay an estimated five billion dollars a year for food and beverages.

The national and the State trend toward fewer, larger farms continues. Over the past 60 years, the number of commercial farms in our State has declined from 225,000 to an estimated 70,000. Yet New York farmers are producing more today than ever before through higher yields per unit of production. Building and maintaining the family farm enterprise as an efficient, economical unit is a continuing problem for farmers. With our increasing reliance for food and fiber production on fewer farmers, the importance of their training in the fundamentals of scientific agriculture, as well as farm management becomes more essential.

Science is the cornerstone of a modern technology that has made a large share of this progress possible. It has been said that of all the world's scientists who have ever lived, 90 percent are alive today. Our knowledge doubles every ten years. Our educational and communication systems have developed to the point where space barriers have been effectively reduced. Agricultural progress in the United States has advanced until, paradoxically, some, who do not understand agriculture, feel that it has become a national problem. In some areas of production it has become a pressure on our population, not vice versa.

Like the capabilities of other segments of our economy, agricultural production of many commodities exceeds the demand. A few, particularly the cereal grains and sorghums, continue to mount in storage, involving an investment of several billion dollars. We live in an era of abundance, a part of which is rightfully attributed to the results of research and extension activities of the colleges and the U.S. Department of Agriculture, as well as to trends in the efficiency of modern farming.

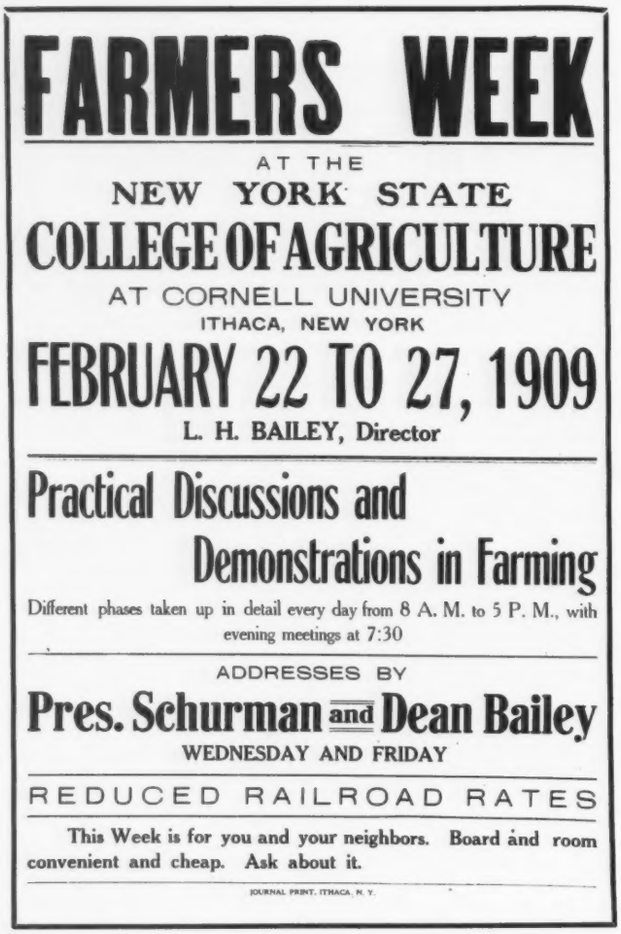
The question is sometimes raised as to whether production research should be continued in view of surpluses. In my judgment, we must continue research in all phases of agriculture, if for no other reason than to remain competitive. The future will call for greater application of science to all aspects of agriculture. Greater emphasis will be placed, I believe, on basic research as a companion program to applied investigation in our experiment stations. While we guide our program today, we must be searching for the knowledge that will be vital to our efforts tomorrow. Further, the conduct of research in our universities affords the great opportunity for the training of men and women who will be our future scientists.

A growing demand from many world areas for technical assistance points up another important role for our dynamic agriculture. In many parts of the free world today, our Nation is engaged in a vast effort to help undeveloped and underdeveloped areas develop their own basic resource—a strong agriculture. It will provide a firmer base upon which an industrial economy can be built. This is of increasing importance to world peace, as well as to the development of international trade.

American land-grant colleges and universities have shouldered an important part of the technical assistance program during recent years by sending staff members to live and work in other lands. In addition, they have admitted thousands of foreign students for undergraduate and graduate study. At Cornell University, for example, 40 percent of all our foreign students are studying in agriculture. Ideas know no geographical boundaries. We are convinced of the great and expanding role of our College of Agriculture in world agriculture and plan to develop this area as one providing great opportunities for American-born students, as well as those from other lands.

We have within our grasp the ability to continue U.S. agriculture in its enviable role of world leadership, and the American people have the imagination and the fortitude to direct it to new levels of accomplishment for mankind everywhere.

In our own State, agriculture has a bright future if we can keep it competitive with other areas. Farmers, cooperatives, agricultural industries, the College, and all other interested groups, working closely together, will assure a strong agriculture in our Empire State in the years ahead.



FARMERS WEEK

AT THE

NEW YORK STATE

COLLEGE OF AGRICULTURE

AT CORNELL UNIVERSITY

ITHACA, NEW YORK

FEBRUARY 22 TO 27, 1909

L. H. BAILEY, Director

Practical Discussions and Demonstrations in Farming

Different phases taken up in detail every day from 8 A. M. to 5 P. M., with evening meetings at 7:30

ADDRESSES BY

Pres. Schurman and Dean Bailey

WEDNESDAY AND FRIDAY

REDUCED RAILROAD RATES

This Week is for you and your neighbors. Board and room convenient and cheap. Ask about it.

JOURNAL PRINT, ITHACA, N. Y.

An early poster for Cornell's biggest open house.

—*ETI*

Countryman Picks

Cornell's Agricultural Progress Days Highlights

DAIRY DAY

- *Symposium*: *The Challenges in Obtaining Profitable Milk Production per Cow.* With discussions on breeding, feeding, and general operations.
- *Forum*: *Adjusting Farms and Marketing to Bulk Milk Handling.* Covering quality control, efficient layout, and costs.
- *Fashion and Its Implications—Special Program for Women.* Also held on Farm Forum Day.
- *Research on Parade.* A presentation showing over 100 new products developed from agricultural research.
- *Annual Rice Debate Stage.* Resolved: "That the production of all agricultural commodities should be free of government controls."

FARM FORUM DAY

- *Our Dynamic Agriculture.* Speech by Charles E. Palm, Dean, College of Agriculture.
- *Panel*: *Increasing the Market Power of Farmers . . .* Through marketing organizations, market expansion, and adjusting supply.
- *Keynote Address.* By George McGovern, Special Assistant to President Kennedy and Director of the U.S. Food for Peace Program.
- *The Proposal to Manage Milk Supplies.* Discussions on production controls—pro and con.
- *Eastman Stage Contest.* This is the fiftieth anniversary of the speaking contest.

FOOD SCIENCE AND INDUSTRY DAY

Morning Program—Theme: Product Improvement and Product Development.

- *Vegetables*—Lectures on improving color of french fries and potato chips, breeding vegetables for processing, and others.
- *Fruit*—Featuring discussions on new apple varieties, apple processing, and the future of the apple juice industry in New York.
- *Poultry*—Lectures on egg packaging and new poultry and egg products. Panel: Do We Need a Label Program for New York State Quality Eggs?

Afternoon Program—Theme: Operations and Problems in Food Industry.

- *Chemical in our Foods*
- *New Food Processes*
- *Mechanical Fruit Harvesting and Handling*
- *Forum*: *High Quality Pork Through Breeding and Feeding.*
- *Quality Foods for the Consumer*—Panels on meats, poultry, dairy products, fruits, and vegetables.
- *Keeping Dairy Cattle Healthy.*

CENTRAL EXHIBITS—Judging Pavilion from 9:00 a.m. to 4:00 p.m. on all three days.

Dispensing with the Dispensible

by Zilch

ZILCH IS tempted to say "welcome again to Farm and Home Week" . . . but times do change, don't they? In any case, Zilch does welcome you and hopes that you will inspect with satisfaction the simple words of this humble author.

There is one part of this joyous occasion, however, that has withstood most of the ravages of "progress". That part being Zilch's annual parting words to the friends of the *Countryman* and members of the staff who have proved immeasurably dispensible and who will be replaced after this month.

These parting words have traditionally taken the form of a last will and testament. And with all due respects to the legal structure of such a document, Zilch will have a go at it.

To the Editor-in-chief: After reading some of the garbled, anti-semantic, literary attempts of this "wild bull of the campus," Zilch wonders how the *Countryman* has managed to maintain any semblance of grammatical correctness. To him, Zilch grants one copy of *The Elements of Style;* a thousand-pound bag of Purina Chow rabbit food; and the hope that all his spelling errors will be small ones.

Managing Editor: Already departed from behind these sainted walls of ivy, dear ol' Phoebe is spending most of her time trying to stop a defective engagement ring from turning her finger green. Zilch leaves to her, and the man who is about to put an 'r' in her M.S., a three-week correspondence course from the Home Ec College's Family Relations and Child Development Department.

Business Manager: Now developing his theory: The balance sheet—a deceptive tool, this digital despot will be the inheritor of volumes I, II, and III of the *Countryman's* classic: *Unpaid Bills—Unlimited.*

Advertising Manager: His bold deceptions, and savage subterfuge have made him a legend in advertisting circles and among down-town Ithaca merchants. For him: a copy of *The Art of Small Talk;* and the reminder that magazines aren't meant to have more ads than mail order catalogs.

Associate Editors: Him: an engraved copy of the old journalists adage: "If you're not an authority, quote one." Her: the latest edition of the *Cornellian* . . editor; and four feet, five inches of the Editor's desk—a dimension comparable to her height.

Circulation Manager: Zilch promises him that he shall forever be known to have been "Entered as second class matter, postage paid at Ithaca, New York."

Public Relations Manager: For him, a copy of the College Press Service's best seller: *The Press Release in Literature.*

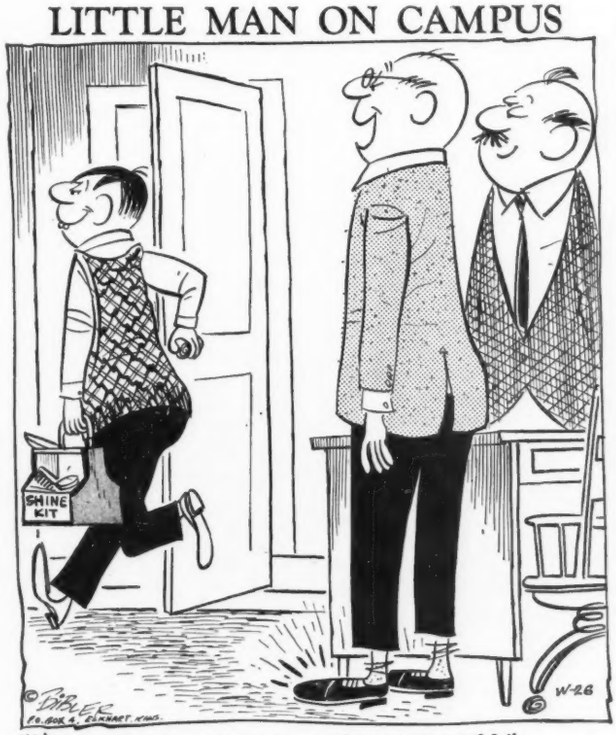
Board of Directors: They just don't understand us! We're not really radical, we're just exploring new frontiers! Zilch has nothing to give to them. After all, what do you give someone who has everything?

Ag-Dom Rep: Zilch reminds him that its better to "walk softly and carry a big stick" than to stamp loudly while waving a wet noodle.

To Trudy, a glamorous ray of sunshine in ETI's Vis Aids section, a fond farewell from a "fast buck."

The Countryman Staff: If you don't know to whom you owe your loyalty, you might find yourself branded with a large "Z"—and that doesn't mean Zorro!

LITTLE MAN ON CAMPUS



"NOW THERE'S A STUDENT WHO'LL GO PLACES."

Before That Trek To Cortland . . . .

Stop off at Bartholf Mobil to gas up the old jalopy. Not only will the friendly service please you, but the location is so convenient—just off campus on the Cortland road, where Dryden Road and a mess of others come together.

Bartholf Service Station

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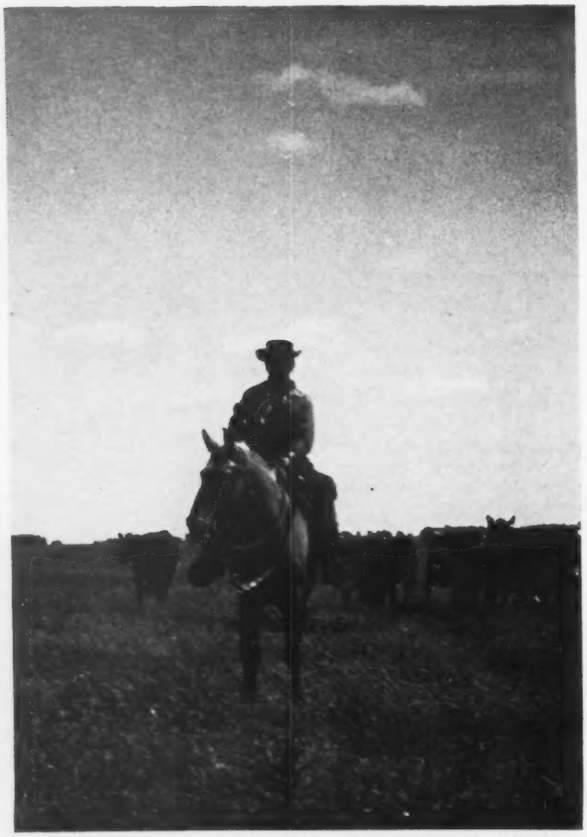


Argentina's livestock industry is making a "comeback" after suffering through the ruinous policies of the Peron regime.

In South America

We Sensed An Urgency For Progress

This progress will affect trade between the Americas.

by William B. Ward, Head
Department of Extension
Teaching & Information

IN Sao Paulo, Brazil, we felt the strong pulse beat of the fastest growing city in the world. On ranches in the Pampa region of Argentina we saw a livestock industry recovering from the ruinous policies of a former dictator. In cities and villages and on farms of three other South American countries—Uruguay, Chile and Peru—we talked with key government officials, businessmen, people on the street, and farmers. Although many of their economic and social problems seemed almost overwhelming to us, we were impressed with their impelling desire to help themselves and to make more rapid progress in the years ahead.

We believe there will be great agricultural and industrial developments in these countries in this decade if an effective damper can be put on inflation and if their economies can be reasonably free. And these developments will increase their wealth, raise the standard of living of their people, and increase their trade with the United States.

Before continuing, perhaps I should explain the editorial "we" in this article. Last October and early November, I had the privilege of accompanying the then Secretary of Agriculture, Ezra Taft Benson, on a trade development trip to South America. In the Secretary's party on this trip were ten press, radio, and television representatives. We had the opportunity to discuss trade with presidents and ministers of agriculture and to become better acquainted with the agriculture of these countries. Everywhere we went we received a warm and cordial reception.

World's Largest Trade

I was often asked upon my return whether trade between the Americas is really important to us. Actually, this trade represents the largest in the world, and much of it is agricultural. U.S. agricultural exports to South America and to other parts of the world amounted to more than 4½ billion dollars in 1960. These exports cut down on our surpluses and strengthened prices here at home. It is interesting to note that without the exports under Public Law 480 alone, our government's investment in surplus farm products would be about twice as much as it is now. Commercial agricultural exports for dollars are even more important to our farmers because they are much larger.

Evidence indicates that our Food for Peace and other export programs are helping to build permanent markets for U.S. farm products. When expected industrial and agricultural developments materialize in these countries, the standards of living of the people will improve. Per capita incomes and population may expand faster than domestic agricultural production. With such progress, exports of U.S. farm products to South America should increase in the years ahead.

One way to foster South American progress will be more research, particularly in agriculture. For example, during the Perón regime in Argentina, agricultural research was brought practically to a standstill. One of President Frondizi's top agricultural advisors told me the stifling of research had cost Argentina 15 years of progress. I couldn't help thinking of arguments advanced occasionally in the U.S. favoring cutbacks in research until our surpluses are absorbed!

Two-Way Trade Street

Our government has religiously followed a policy of not dumping food commodities on the world markets to interfere with normal marketings. The U.S. is de-

In each of the five South American countries, Secretary Benson made the Minister of Agriculture an honorary life member of the 4-H Clubs of America. Here he presents a 4-H tie clasp emblem to Manuel Casanueva, Minister of Agriculture in Chile. *W. B. Ward*

vising trade programs that are mutually advantageous to our country and to those countries with whom we trade. Building a two-way trade street is vitally important.

One of the hottest subjects of current interest revolves around this topic of two-way trade, and sugar is the commodity most often mentioned. Several South American countries asked why they couldn't get larger export sugar quotas from the U.S. now that the Cuban quotas have been eliminated. They would be willing to buy more U.S. food products (wheat, for example) if they could sell more sugar to us. Under the U.S. Sugar Act, most of the Cuban sugar quota went to the Dominican Republic. Because the Dominican Republic is governed by a dictatorship, the people in the countries we visited could not understand the U.S. position. Believe me, it was difficult to explain, law or no law. There is hope that the Sugar Act will be amended soon to permit increased quotas to some of the South American countries that have a sugar surplus. Brazil, for example, is the world's third largest sugar producer.

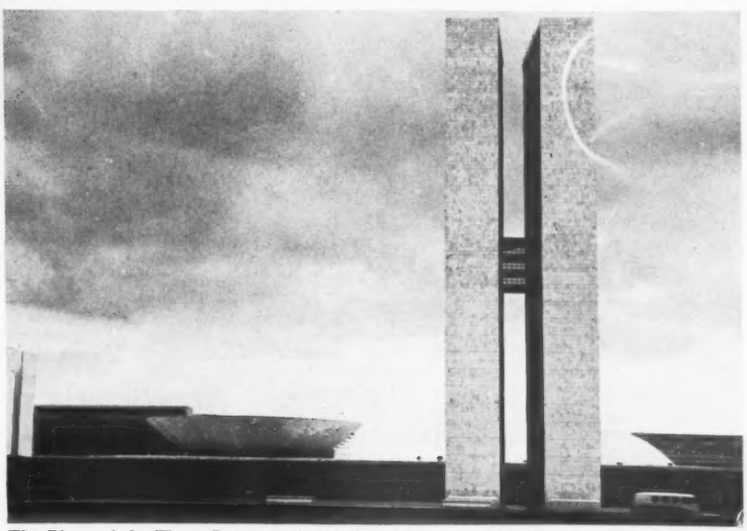
One thing that impressed me was the fact that U.S. laws dealing with trade are vitally important to our relations with countries abroad.

It is in the best interest of the free world to recognize the principle of comparative advantage and for countries to produce those things which they can produce best and import those which they produce less efficiently. The U.S. policy under the Eisenhower administration was to move in the direction of a more liberalized trade policy and the use of competitive markets as the best means of moving our agricultural products. President Kennedy also proposed a reduction of trade barriers as part of an expanded and long-term foreign market program.

Responsible people in the five South American countries are worried over the use of Cuba as a base from which communists are further infiltrating their own and other Latin American countries. We saw considerable communist activity on our trip. (Communist newspapers and signs reading "Yanks—Hands Off Cuba!"; a strike and riot of university students in Montevideo, and hard core communists at work in the universities. One Latin American newsman told me that "a university is a place you go to practice your politics.") Top government leaders in the five countries, however, are strongly anticommunist. At the time this article was written, Peru had broken off relations with the Castro regime. Several other countries, including the United States, have since taken the same action. Despite the efforts of communist propagandists, U.S. prestige in the countries we visited is high.

Land reform is a "burning issue" and communists use it to the hilt. Ninety percent of the land is owned by 6 percent of the people. So far, there doesn't seem to be much more than "lip service" given to this important subject. A practical land reform program, plus a better standard of living for the people of these countries through industrial and agricultural development and better educational opportunities would be the most powerful deterrents to communism.

There is no question that these South American countries have grave economic and social problems to solve, but they show great promise of success. They have tremendous potential for growth. Now a familiar quotation has a new sound: "Go South young man," rather than "Go West young man."



The Plaza of the Three Powers (above) is the center of the government in Brasilia, the new capital city of Brazil, built out of the vast wilderness in the interior of the largest country in South America. (Right) Any conveniences of modern life seem to be beyond the reach of these workers and their families on a farm in Peru.

Professors Allen (standing) and Kellogg use the parabolic reflector to capture a bird song. *Richard B. Fischer*

Bird Call Recording at Cornell

AUDIO ORNITHOLOGY

A phonograph, a few records from the Orinthology Laboratory–and any room can be transformed into a swamp, an open field, or "Dawn in a Duck Blind."

by Jane P. Doyle '62

FAR ABOVE the rush of traffic, in a city apartment, an elderly man sat quietly, head back and eyes closed, listening to early morning sounds of birds and insects.

A few years ago this scene wouldn't have been possible. Now, thanks to the Cornell Laboratory of Ornithology and the teamwork of its staff members, anyone can enjoy the sounds of marshes, woods, and meadows within his own home. All the equipment needed is a phonograph and one or two of the Laboratory's bird song recordings.

These recordings, produced by the Laboratory from its extensive collection of natural sounds include not only bird songs, but frogs, toads, insects, and even the early morning sounds of a duck marsh.

Since they first appeared, these Cornell records have been heard by people all over the United States and in many foreign countries. Although intended primarily for listening pleasure or as learning devices they are sometimes used in unique ways.

Mr. Richard C. Davids, in an article for the *Christian Science Monitor,* tells of a growing hobby—bird calling with records. With his phonograph placed near an open window, Mr. Davids plays one of the bird records. Often within a few minutes a bird will call in response and may even come close to the window, looking for the sound of the intruder.

According to Dr. Peter Kellogg of the Laboratory, who was a pioneer in this field of "bio-acoustics," the technique is especially good for beginners because it is selective. "Not all birds respond to the recorded call" he explains. However, if a bird does respond, it will only be attracted to the call of a member of the same species.

This method of attracting birds is not used only by amateurs. Professor Kellogg began using it many years ago to lure birds to his microphone.

Once, while playing the song of a Mockingbird he heard a noise at the window. There sat a Mockingbird. Suspecting that the bird might have responded to the sound he moved a speaker out of doors. When the record came on, the excited bird first hopped around the loud speaker. Finding nothing, he then tried song as a means of intimidating this new threat.

Later, Kellogg tried this method on other birds

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increases income over feed cost

Are you feeding out all of the milk producing *potential* inherited by your cows? So often herds with outstanding production capabilities just don't deliver when it comes to figuring net profit per cow. Many low producers are overfed—and valuable feed is wasted. Other cows—with high potential—are underfed which prevents them from producing to *capacity.*

Beacon's Hi-Speed Dairy Program matches the feed to the cow's *need* and does away with rigid grain to milk ratios. This scientific *feed programming* has been tested at the Beacon Dairy Research Farm, and proved by hundreds of successful Eastern dairymen who find that returns over feed cost are consistently *increased.*

Let's look at the records

The "proof of the pudding" is in these summaries of D.H.I.A. herds which changed over to the Beacon Program. The following tables clearly show consistent *increased* production, *increased* butterfat, *increased* income over feed cost. These D.H.I.A. figures have been accumulated since the 1956-57 test year and include 1959-60 results.

FIRST YEAR ON BEACON
Average Increases for 1,476 Cows in 36 Herds

	Milk (lbs.)	Fat (lbs.)	Income Over Feed Cost
Total 1-Yr. Increase	724	26.9	$16.47

TWO CONSECUTIVE YEARS ON BEACON
Average Increases for 773 Cows in 20 Herds

	Milk (lbs.)	Fat (lbs.)	Income Over Feed Cost
1st yr.	610	22.7	$16.54
2nd yr.	706	33.1	$27.60
Total 2-Yr. Increase	1,316	55.8	$44.14

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Average Increases for 250 Cows in 7 Herds

	Milk (lbs.)	Fat (lbs.)	Income Over Feed Cost
1st yr.	488	20.0	$ 5.56
2nd yr.	807	26.5	$31.14
3rd yr.	1,004	40.1	$20.01
Total 3-Yr. Increase	2,299	86.6	$56.71

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and found that it functions well, especially among small, wary landbirds such as the thrushes.

However, a previous tape isn't always needed to attract birds. Sometimes recordings are made in the field and then re-used on the same individual, thus obtaining an even better recording.

Painted Bunting Call

Charles Sutherland and Warren Brockelman, both '63, tell of the time last summer when they were attempting to tape the song of a Painted Bunting, a bird not then in the Laboratory's collection.

"One day in late July," Sutherland and Brockelman relate, "we arrived at the Savannah River Refuge in South Carolina and found a number of individuals calling. On our first tape the bunting was 50 yards away. By playing this tape back, we attracted the bird to within 20 feet of our equipment.

A chestnut-collared longspur virtuoso sings for the Cornell microphone. *A. A. Allen*

"Unable to locate the rival bird" the men continue, "but still hearing a call, the bunting responded with loud, clear singing. We took advantage of this and taped several minutes of his song."

Searching to Identify Bird Calls

The Library of Natural Sounds, from which the records are made, had its origin more than 30 years ago in the need of a young Cornell instructor. The instructor, and later professor, Peter Kellogg, was looking for a way to aid students in identification of birds and bird calls.

Working with only a recorder and microphone, Kellogg made several recordings. Anyone hearing the beautiful reproductions on *American Bird Songs* will find it hard to believe that those first attempts almost ended in failure. Wind, insects, and even the whirring of the machine nearly drowned out the faint chirps.

Once, a bird obligingly landed on the microphone and began to sing. When it had finished, Kellogg hurried to play back the recording and found to his dismay that the shuffling of the bird's feet on the sensitive microphone completely drowned out the song.

Later, at the suggestion of Mr. M. Peter Keane, the microphone was suspended in front of a saucer-

shaped parabolic reflector about 30 inches in diameter. This large disc focuses the sound on the microphone, increasing the energy entering the microphone as much as 40 times. This has the same effect as moving the recording apparatus 40 times closer to the bird.

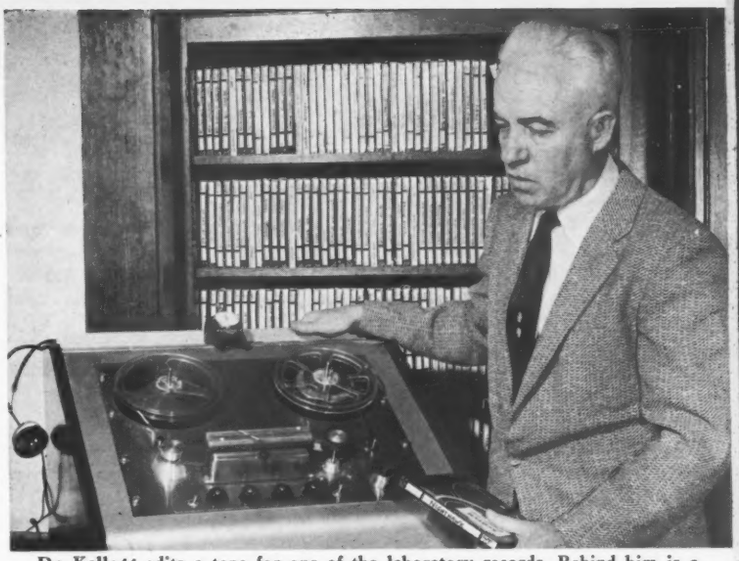
Cooperation Among Scientists

Though the idea of recording birds has been fostered by Kellogg, many others have shared in building up the library. Dr. A. A. Allen, also of Cornell, is not only an expert on the subject of bird photography, but has also taped thousands of hours of natural sounds. Persons familiar with *An Evening in Sapsucker Woods,* or *Dawn in a Duck Blind,* will also remember his interesting commentary on the various songs and calls.

Every year Dr. Kellogg receives many requests for excerpts from the recordings. Not all requests can be filled but anyone who wishes copies of any bird song to be used for scientific purposes may obtain them by sending his request, along with sufficient tape to the laboratory. In this way, Cornell cooperates with scientists all over the world.

Such cooperation sometimes pays special dividends. "In 1950" reports Dr. Kellogg, "I received a series of recordings made in Africa by Miles E. W. North, an amateur ornithologist who was then a district commissioner in Nairobi, Kenya. Although the bird songs were technically excellent, poor equipment had garbled the sounds enough to make them almost unusable."

An acquaintance of North's in Chicago, Kellogg relates, learned of this problem and donated two thousand dollars to Cornell. "We then sent him a set of high quality equipment." North later became a Research Associate of the Laboratory and the recordings which he made have been made into a record, *Voices of African Birds.*

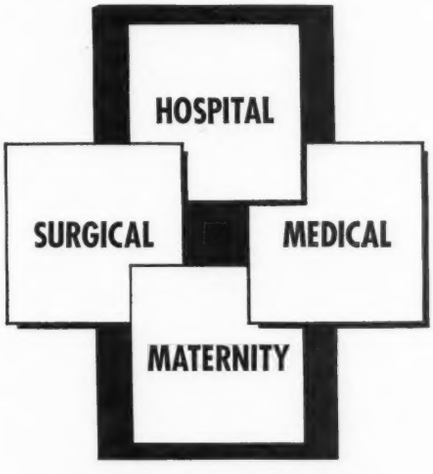


Dr. Kellogg edits a tape for one of the laboratory records. Behind him is a portion of the Library of Natural Sounds. *Richard B. Fischer*

Probably the recordings which please Kellogg most are those made by his students. Each year several graduates and undergraduates are sent into the field. Last summer Chuck Sutherland and Warren Brockelman, armed with a map and a list of southern birds not in the library, spent two months traveling and recording. When they returned in late August, they had taped more than 100 species including 20 never before recorded.

Recording has come a long way since scientists first captured the sound of a bird—but the field of bio-acoustics is still growing. Each year, new uses are discovered for this medium of research. Whatever advances come, however, the Laboratory of Ornithology will play a part in their discovery.

4 SQUARE PLAN



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Great Issues in Agriculture

"Our dynamic agriculture" presents grave problems along with tremendous progress. Many of these problems might well be called today's "Great Issues in Agriculture." The Countryman asked the Directors of Research, Extension, and Resident Instruction to describe some great issues in their major areas of College work; and seven College of Agriculture professors to explain issues in fields with which they are associated. To lead off this special section we asked Secretary of Agriculture Orville Freeman to give us an overall look at our nation's agriculture.—Ed.

Secretary Freeman: The Goals of U.S. Agriculture

by Orville Freeman
Secretary of Agriculture

USDA Photo

ALMOST daily since I became Secretary of Agriculture, representatives of the press and news media have come to my office. They all ask some form of the question, "Have you a solution for the farm problem?"

There is no easy answer, no ready formula, no one program that will "solve" the problem. There are goals, yes; objectives certainly — and it is our aim, in cooperation with Congress, farm groups, farm leaders, and all who are interested in the welfare of agriculture, to develop and pursue policies and programs that will achieve these goals and objectives.

The three major goals, as I see them, in a positive constructive approach to the problems of U.S. agriculture are:

First, the production of enough food and fiber to provide high living standards for all our consumers and customers at home and abroad now and in the years ahead.

Second, opportunity for the operators of efficient family farms to achieve parity of income without exploiting either consumers or taxpayers.

Third, the effective, efficient, and wise use of our agricultural abundance so that it may fully serve the needs of humanity, both at home and abroad.

Mankind is about to enter—as we in this country have already entered—a new age: The Age of Plenty. Only 15 years ago at the end of World War II much of the earth was so devastated that it seemed there could never be enough food to meet even the minimum needs of a hungry world. This was, in part, the result of war, but it was also a manifestation of a condition that has been chronic throughout history.

In all of history, one element has been constant: Scarcity. It is not pleasant to read the history of man's endless struggle against hunger—his agony of starvation. Historians have recorded as many as 20 famines in various parts of the world during a single century. It has been only in recent years and in only a few countries that agricultural abundance has ever been a major economic problem.

In our nation, and in some other lands, agriculture has now broken through age-old barriers that hitherto prevented abundance. All over the world people awaken today to the hope that their long sought wants and needs for food, shelter, and clothing can be fulfilled.

Only when this goal has been reached, or is well on the way to being reached, will humankind begin to achieve that permanent peace, the desire for which lies deep in the hearts of all men.

As President Kennedy said in his Inaugural Address: "All this will not be finished in the first one hundred days. Nor will it be finished in the first one thousand days, nor in the life of this Administration, nor even perhaps in our lifetime on this planet. But let us begin."

For those of us who have the welfare of U.S. agriculture at heart, we can begin by helping our people generally to reach a deeper appreciation and better understanding of the job agriculture has done, is doing, and can do. The productive achievements of our farmers constitute an outstanding success story—perhaps the most important success story that has been written by any major segment of the national economy.

Too few of those who live in the cities and towns know the immense

contribution agriculture has made to their standard of living. Too few appreciate the problems our farm people have. Too many misunderstandings exist between labor and agriculture, between consumers and farmers. Though U.S. consumers are better fed, and at lower real cost, than ever before, and better than consumers in any other country, our agriculture is referred to more often in terms of surplus or subsidy than in terms of success.

We need to retell the story of the farm as the backbone of this nation.

We need to retell the story of the fabulous efficiency of our agriculture—the average farm worker today provides food and fiber for about 25 persons compared with only 7 persons 50 years ago.

We need to retell the story that food in this country is a tremendous bargain. An hour of labor today buys twice as much steak, milk, and butter as it did in 1929—and three times as many eggs.

We need to retell the story of agriculture as a $40 billion customer for the products and services of the U.S. economy.

We need to tell the real story of our abundance — of how farmers have been subsidizing consumers rather than the other way around.

If the people of the United States fail to appreciate and understand this potential of agriculture, it cannot make its full contribution to national prosperity and security and to world peace.

The Research-Surplus Conflict

by W. Keith Kennedy
Director of Research

AGRICULTURAL research is the foundation of the high standard of living the American people enjoy today. Never before has the working man spent so small a portion of his working day earning the food he and his family eats. In 1914 when bacon cost only 27 cents a pound the working man had to work three times as long to get a pound of bacon as he does today; two and one half times for a loaf of bread or a pound of beef —still longer for a pound of poultry.

It is indeed a paradox that while we in the United States have an abundance of wholesome, inexpensive food, two-thirds of the world's population go to bed hungry or inadequately nourished. Everyone agrees that it is wasteful to continue to produce more agricultural products than we can consume, but is curtailing production research the answer? Or, should we be searching for better ways of capitalizing upon our efficient agricultural industry?

Rather than lose the tremendous advantage we have in agricultural production let us explore ways of using "Food for Peace" for better distribution of the food sorely needed by people in other parts of the world. At the same time we should continue to search for ways of bringing agricultural production more in line with our needs without creating an inefficient and weakened industry.

In recent years the New York State College of Agriculture has devoted an increasing percentage of its research effort to methods of marketing our agricultural products, and to the development of new products with the aim of expanding the sale and use of our commodities. The College plans to continue to place a high priority on marketing research and product development, but it also must maintain a well-rounded program in production research.

Production research increases the potential for raising the incomes, and the new technology derived from production research paves the way for reducing costs. The reduction of costs is imperative to a strong agricultural industry because:

1. Marketing problems will be decreased if costs can be reduced or at least maintained at the present level. All products are in direct competition with each other for the spending income of every family. Consumers will make adjustments in their purchases of food products as price changes occur. Once a family decreases its purchases of any food product because of high prices, it is difficult to re-establish the lost market.

2. Interregional competition for markets already is extremely keen. The other regions will continue to conduct production research because they are anxious to reduce costs in order that they might obtain a greater share of our large metropolitan market. New York farmers must employ the latest technology if they are to meet this competition. While interregional competition for our most important product, milk, currently is not as great as it is for our other agricultural products, any relative decline in the efficiency of New York dairymen might hasten its development. With possible changes in processing and transportation, this factor could become extremely important in a very short period of time.

Discontinuing production research for even a few years would be disastrous because:

1. New plant and animal diseases,

ETI

insect resistance to pesticides, and new plant and animal nutritional disorders are constantly arising. Even with a vigorous research program our scientists are hard-pressed to keep ahead of these new problems. For example, new races of oat diseases develop in the South and West and are transported by wind into the East. If our plant breeders did not continuously develop varieties with resistance to these new diseases, in five years our farmers would be unable to grow a satisfactory crop of oats. If our entomologists were not constantly devising new means for controlling insects, a salable crop of several important fruits and vetegtables could not be produced.

2. A research program cannot be turned on and off like a faucet. It requires ten years of intensive and continuing effort to develop a new forage variety. Each year thousands of crosses and selections are made and discontinuing the program for one year might mean a complete loss of the breeding material or at

best a delay of several years while it is re-established.

3. Competition for capable research scientists is just as keen as the interregional competition for the markets of our agricultural products. If production research was curtailed, it would require years to reassemble a competent and effective research staff.

The New York College of Agriculture is utilizing this period of surpluses to strengthen its basic research program in the plant, animal, and social sciences. Through research new knowledge is obtained which will enable our scientists to answer many of the unforeseen practical problems of tomorrow.

It is well to remember that the application of science to agriculture is the key to the high standard of living Americans enjoy today. The first demand on any society is to produce enough food and fiber for its people. Through production research and technology, only 10 percent of our working force provides the entire population with an abundance of wholesome food at bargain prices. This frees the remainder of our population to produce the many other goods and services which we take for granted as a part of modern living.

Changing Role of Extension

by Maurice C. Bond
Director of Extension

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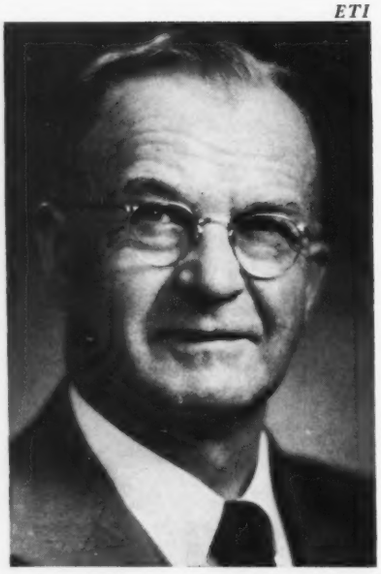

THE TITLE of this presumes change. No one doubts changes in knowledge or changes in problems facing people. Everyone recognizes changes in the vocations of people living throughout rural America.

The basic purposes and objectives of the Cooperative Extension Work have not changed. However, changes in programs have been underway since the inception of Cooperative Extension Work. The first state appropriation to support some extension work was in the judicial district in southwestern New York. This was obtained through the efforts of local people who desired to have the assistance of the College of Agriculture for the people in Chautauqua County. The geographic area supported by state appropriations was soon broadened.

The problems of people have changed greatly, but they still want

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the knowledge of new developments, new techniques, and the results of resarch from the landgrant college. This is true through out the United States as well as in New York.

The wartime situation has caused substantial changes in the extension programs. In World War I, County Agricultural Agents participated in the all-out effort to increase food production for urban dwellers and our armed forces. Home Demonstration Agents carried on an intensive program on the preservation of food for use in the home. The emergency aspect of the Home Demonstration Program during World War II was quite different. Great changes had occured in the kinds of food people ate and the sources from which they were obtained. In World War II, County Agricultural Agents were deeply involved in problems of man power, cooperated with selective service and gave assistance in connection with priorities and shortages in connection with farm machinery and equipment. Very little vestige of the war-time services by County Agricultural Agents appear now in the Extension programs of the 56 counties in New York.

Commercial farmers today are much more specialized than formerly. Farms are highly mechanized. Farmers are deeply concerned with the application of new technology in their crop and livestock enterprises. This has resulted in a specialization on the part of County Extension Agents to meet the needs of the most important types of agricultural and home problems in each county.

Specialists at the State College endeavor to have a broad understanding of the problems of each particular argicultural industry and the ways in which new developments in a specialized field fit into the overall problems. The programs are developed on the type of farming basis. The dairy farmer in concerned with soil, forage crops, as well as the management and care of the dairy herd and the marketing of both milk and livestock products. The fruit and vegetable farmer is concerned with both fresh and processing outlets for his products. In some industries the problems center largely around specific crops such as potatoes or the production and marketing of other vegetable crops.

One new aspect of Extension work comes about from the growing interdependence of producers on suppliers and on marketers and their products. The Cooperative Extension Service has a responsibility to help bring mutual understanding among these groups. Bankers and other credit agencies need to have an understanding of the changing methods, problems and needs of farmers if they are to provide the necessary credit services. The seed trade needs to have information regarding new varities of crops in order that supplies may be available as farmers change from one variety to one that is better adapted, more disease resistant and more productive.

Marketing agencies and consumers need to understand the particular qualities and appropriate uses of food products for both fresh market and for processing. Understanding makes it possible for each supplier, marketer, and producer to do his job well and on time.

In recent years more emphasis has been given to problems of management and marketing. These areas are of increasing significance to producers, firms engaged in marketing, homemakers and young people. Extension programs will continue to change if they are to meet the changing needs of the people they serve with needed information.

Paradox of Student Enrollment

Curt Foerster

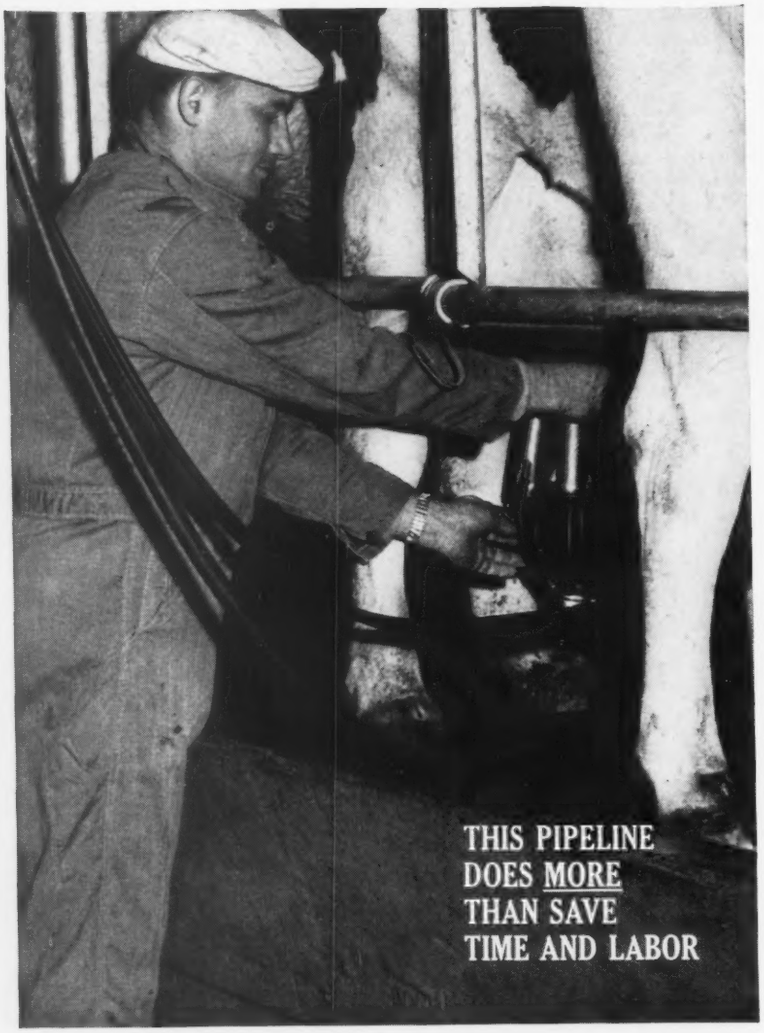
by Thomas C. Watkins
Director of Resident Instruction

ONE OF the most important problems with which colleges of agriculture have been concerned in recent years has been that of reduced undergraduate enrollment. This situation is most surprising in view of the increased demand for college education and the low tuition fees charged by most of the colleges involved. According to statistics gathered by the U.S. Department of Health, Education and Welfare, the undergraduate enrollment in degree programs in landgrant colleges of agriculture in this country was 45,853 in 1948. In three years it fell to 34,774, and since 1951 it has more slowly decreased to a figure slightly under 32,000 for 1959 and 1960. There are many college administrators who feel that the decrease has come to a halt and that an upswing is in the offing as a result of the generally increasing number of people of college age. It is with some degree of pride that our college can say that its enrollment has not followed the country-wide pattern. It has continued to rise, even though it has done so very slowly.

An attempt to pinpoint the reasons for the general loss in agricultural students is difficult in that many factors have been involved, some definite and some indefinite, and some varying in importance from one region of the country to another. It has often been said that in economically good times enrollment in agriculture is apt to fall and that conversely, it is likely to rise when other employment opportunities are not highly favorable and people tend to think more of the security of farm land ownership and opportunities to produce food. In recent years, with the tremendous impact of nuclear fission, business machines and space vehicles, high school students have had their interests directed toward the physical sciences.

Talk of farm subsidies has made many young people feel that agricultural occupations involve dependence upon government for livelihood. Publicity given to farm surpluses has convinced some that the field of agriculture is already overcrowded. The list of such intangible forces is almost endless.

Without doubt, one of the most important reasons for the failure of colleges of agriculture to attract students has been, and still is, a lack of understanding on the part of the public, including high school students and their counselors, as to both the importance and the scope of agriculture. Thus, there has not been an awareness of the breadth



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of educational opportunities available in our colleges. In correcting this situation, the public must be made to realize that agriculture does involve food production on a large scale. We have an ever-expanding population to feed, a demand for higher and higher quality to meet, and foreign commitments in production and technical skill to fulfill. The production of food is an extremely important area of endeavor in this country, and it will continue to be so as far into the future as can be seen.

But a second, and an extremely important, truth of which the public must be made fully aware is that the modern concept of agriculture includes far more than the mere production of beef, poultry, fruits, vegetables, grains, and feeds. It embraces the whole complex of rural and suburban living—its sociology, education, and economics. It includes all of the supporting and contributing biological and physical sciences, such as biochemistry, zoology, and many others.

Agriculture demands a knowledge of the conservation of wildlife and other resources. It encompasses all the business activities inherent in the production, sale and distribution of agricultural chemicals, and, eventually, the processing, marketing, and distributing of human food. Underlying many of these phases of agriculture is the enormous field of agricultural engineering with its design and use of tractors, loaders, spreaders, sprayers, ventilating or drying equipment and a host of additional items.

The need for well-trained manpower in all aspects of agriculture is already great and it is constantly increasing. The College, through brochures, conferences with its admissions counselor, press releases, and many other means, is attempting to inform the general populace of New York, particularly high school students and counselors, of the educational opportunities which it offers. The task is enormous.

There are approximately 1,100 public and private high schools in New York. All of them have counselors who are giving advice to an estimated 150,000 high school seniors this year. Only when a large portion of these people, whose numbers are expanding in every state each year, are made aware of the full meaning of agriculture will colleges of agriculture, including our own, reach their capacities in enrollment. And only then will they receive the public support, both financial and moral, which they so richly deserve.

Farmer in the Suburbs

ETI

Olaf F. Larson,
Head
Department of
Rural Sociology

SUBURBIA, "Urban sprawl," "rural-urban fringe" and "megopolis" are among the terms being introduced into contemporary vocabulary to identify certain population shifts and residence patterns which have been rapidly developing in recent years. A reflection of the concern for the consequences within cities may be found in several proposals before Congress for the creation of a Department of Urban Affairs in the federal government, a counterpart of the U.S. Department of Agriculture.

Outside of cities these changing population patterns have led to a whole set of complicated problems which involve both the newcomers and the established residents, farmers and non-farmers alike. What does happen to farms and farmers caught in the suburbanization waves from our cities? What kinds of problems do such farmers face? What kinds of adjustments do they make? These are questions of concern throughout the United States, but nowhere are they more pressing than in the heavily urbanized Northeast.

Two basic changes take place with the growth of the non-farming, suburban population. First, changes in land use affect individual farm enterprises and opportunities to enter or stay in farming. Second, increases in the total number of people and in the population density affect the farmer's community and his other group relationships. The impact of the changes in land use on the farmer will vary a great deal depending on his individual situation and characteristics. Further, the adjustments he is free to make to the changing land use situation are an individual matter to a great extent. There is more sharing of the effects of the changes brought about by the increase in population numbers and density, and the decisions which will facilitate needed adjustments to the new situation are a group matter or may even be made in such a way that the individual feels he has little influence on the outcome.

We have some measure of the scope of the two basic changes mentioned. A recent report from the U.S. Department of Agriculture estimates that about one and one-third million acres, of what in many cases is the best agricultural land, is being shifted each year into various non-farm uses.

About two-thirds of the great increase in the nation's population since 1950 has taken place in what the U.S. Bureau of the Census calls "standard metropolitan areas." In general these are counties which include a central city of 50,000 inhabitants or more, although in some cases adjoining counties are also included in such areas. The significant fact is that within these standard metropolitan areas about 95 percent of the total population gain has been in the outlying parts and only 5 percent has been in the central cities. There were 168 of these metropolitan areas in 1950. A Census study made in 1959 reports that for these areas the central cities had grown only 1.5 percent since 1950, the rural farm population had declined over 7 percent, the urban centers other than the central cities had grown by 25 percent, but the rural nonfarm people had skyrocketed by 117 percent. Considering only the Census-defined rural population within these metropolitan counties, farm dwellers in 1950 had been outnumbered by non-farming rural residents nearly three to one, but by 1959 they were outnumbered about seven to one.

Urban sprawl increases farm land values; then higher assessments and higher taxes are likely to follow. This may make use of the land for agriculture uneconomic, forcing the farmer out of agriculture or to a farm in a less costly location. For some farmers, the sale of the land may provide a higher retirement income than they would have had without the suburbanization trend. Needed farm enlargement may be hampered. To cite New York's most extreme case, the average value of farm land and buildings in Nassau County was reported by the 1959 Census of Agriculture at $8,570 per acre, as compared with $3,164 five years earlier and the average of $144 for the state as a whole.

Non-farm land use may adversely affect farms through depletion and pollution of ground water, rapid runoff, highway relocations, traffic, and complications in maintaining line fences. Non-farm people may object to some of the normal farming practices and activities and to some of the noises and smells connected with livestock and poultry operations.

Farmers remaining in a subur-

Architect's sketch of Cornell's new animal husbandry building, to be named Frank B. Morrison Hall in honor of the late professor. Formal dedication ceremonies and a dedication symposium, "Animal Nutrition's Contributions to Modern Animal Agriculture," slated for Sept. 12-13, 1961. The animal husbandry department will move into the building in July. *ETI*

banized area are not only a minority but are affected by the great increases which must be made in all kinds of publicly supported services to take care of the increased non-farm population. Suffolk County provides a most dramatic case in New York State. Population of all ages increased about 141 percent from 1950 to 1960, compared with the statewide gain of 13 percent, while for roughly the same period, registration in public elementary and secondary schools climbed by 219 percent as against the statewide increase of 38 percent.

Studies have shown that under present taxing systems, farmers often pay more than their share of the new public services because residential developments bring a relatively low tax base per head and because farm properties frequently are over-assessed relative to other kinds of property.

Sewage disposal and water supply become problems as population density creeps up. Also, the new population is likely to have different and higher standards for public services, another factor leading to higher costs and a source of possible tension. Need for new facilities is not limited to the publicly supported services. For example, churches are affected. Organizations for farmers must make adjustments through consolidation of existing local units or by accepting the non-farmers as members.

Inevitably, the farmer remaining in suburbanized areas becomes more involved in community and public problems. The solution of these problems seems to lead to more reliance on some level of government and to more social controls. New social machinery such as planning and zoning becomes necessary in the interest of the general and long-time welfare. The wise and understanding use of such devices is still another aspect of the adjustments required for the farmer who remains in suburban areas.

Farm Power in the Market Place

ETI

Glenn W. Hedlund,
Head
Department of
Agricultural
Economics

Have you heard or read that farmers do not have bargaining power comparable with labor or industry? If so, you are tuned in on one of the current issues in farm circles. Perhaps issue is not the best term because Democrats and Republicans, Farm Bureau, Grange, and Farmers' Union, East, Midwest, and Far-west, in fact, everyone concerned with agriculture, seem to agree that farmers need more bargaining power.

The farmers' problem, so the analysis runs, is that they have little to say about the prices they receive for their products. They meekly ask the potential buyer what price is offered. Or, worse yet, they consign their products to distant markets without even having an opportunity to refuse the price offer.

How many dairymen deliver milk for a month or even longer before they know what price they will receive? These examples serve to indicate that the typical farmer in a particular instance has little, if anything, to say about the price he receives.

Conversely, on the buying side, farmers pay the prices asked, not those which they offer. The prices they pay for feed, machinery, fuel, automobiles, and most everything else are stipulated by the sellers. Oh yes, any self-respecting farmer will bargain when he trades tractors or automobiles. He may bargain a bit with the feed merchant, but by and large farmers, like most of the rest of us, expect to pay the prices established by the seller. In most circumstances a farmer would be about as effective in bargaining for the price of many farm costs as he would in trying to buy a four-cent postage stamp for three cents.

It is clear that the individual farmer has little, if any, influence on the prices at which he sells or buys. If the individual farmer has no price power, it must follow that farmers as a group have none.

Some of us would want to disagree with reasoning from the individual to the group. Although an individual farmer's production of a commodity is so small in relation to the total that his production essentially has no effect on price, this is not true of all farmers. Their total production does affect price, so they do have something to say about price. Even so, we must grant that farmers have little to say about their prices.

This, so the analysis continues, is the opposite of what labor and industry do.

Labor, through its unions, bargains with employers for wages and a host of fringe benefits and working conditions. Organized labor works only when wages and other employment conditions have been agreed upon. Labor has bargaining power through its organizations.

Industry, on the other hand, sets the price at which its products will be sold. Where so-called "fair trade" laws are effective, industry may even stipulate the retail price.

By and large, however, retailers may sell products at whatever price they choose, but they find that they canot replace these goods without paying the prices set by the manufacturers. So industry determines its costs of production and sets selling prices which cover these costs. Industry then has bargaining power through its size and ability to administer its selling prices.

The above analysis is elementary and incomplete. Some labor goes without jobs, some industrial products cannot be sold at the prices set, but by and large, both labor and industry have more control of their economic well-being than do farmers. Therefore, so the reasoning runs, farmers should have more bargaining power.

The author prefers the term "market power" to bargaining power because it is power over price which is wanted regardless of whether it is obtained by bargaining or by other means.

How can farmers obtain market power? They cannot gain great size like industry and still remain individual farmers. So the answer is to do like labor does—get together and operate as one entity rather than as thousands or millions of individuals. Farmers can get together in cooperative or other organizations and solve their price problems.

Now this idea is not new. It is about as old as the marketing of farm products. Many groups of producers have joined together in cooperative organizations and have had something to say about their marketing. But, most of these are not national in scope and their

market power has been limited and circumscribed. Others, because of peculiar circumstances have had considerable market power. Some fluid milk cooperatives have improved prices over what they otherwise would have been. Others by regulating the volume of sales, the utilization of the product, and by other means have been able to affect prices. Their success has been limited and certainly not nationwide.

The idea of gaining market power through cooperative monopoly was tried widely about forty years ago. The principal salesman of the idea was Mr. Aaron Sapiro who advocated that if all producers of a product would get into a national cooperative or system of cooperatives, it would be easy to exercise real market power. Many cooperatives were formed with large numbers of members who were bound to the cooperative by long-term "iron-bound" contracts. These usually required that members must market their products through the cooperative for five years or pay prohibitive penalties.

Some of these cooperatives were never sufficiently well organized to test their affect on market power. Some were.

Some had enough market power, primarily by keeping members' products off the market, to be able to influence prices upward. A few did this so well that farmers increased production a great deal in order to take advantage of the good prices created by the cooperative.

Those who were not members of the cooperative were able to sell all they produced at prices near those established by the cooperative. The cooperative sold only what the industry could not buy from non-members. As a result, surpluses accumulated and members did not get paid for part of their production because it had to be held off the market in order to influence prices. Instead, they had to raise additional capital to provide storage space for the accumulated stocks. Eventually the cooperative could no longer expect its members to support a good price primarily for the benefit of non-members. They lost market power because they could not control supply.

In more recent years many aspects of pricing farm products have been assumed by government through one or more programs. In some cases, prices have been affected by price support programs and in others by marketing orders and other means. However, supply has not been controlled and farmers continue to be dissatisfied with their lack of market power.

Many farm leaders and organizations continue to search for ways and means to acquire and exercise market power. These vary from naively advising members to hold commodities off the market to consolidation of the bargaining power of several cooperatives in a milk market. In between are the attempts at bargaining by individual cooperatives and the market power created by marketing orders.

All are seeking to acquire some market power for farmers. As of now the future direction is not clear. The lessons of the past should help prevent repeating some of the errors of the past.

Farm Surplus - Its Cost and Cure

ETI

Kenneth L. Robinson, Department of Agricultural Economics

THE U.S. has a "farm problem" mainly because total farm output during the past two decades has continued to rise more rapidly than the population has increased. Rising output relative to the growth of population has caused prices to decline.

Some of the price disadvantage has been offset by a larger volume of sales per farm; however farmers generally have not fared as well as urban workers during the past decade.

Expressed as a percentage of total production, our present overall farm surpluses are relatively small. In the past few years, agricultural production has exceeded consumption by a margin of only five to eight percent annually.

But this average figure does not tell the whole story. Physical surpluses are confined to a small group of commodities, mainly wheat, corn, cotton, and grain sorghum. These four commodities now account for about 85 percent of all governmental holdings of farm products. Butter and cheese surpluses have been almost eliminated in recent years. Cotton stocks have also declined.

Wheat and feed grain surpluses, however, have continued to rise. The build-up in grain stocks has been due to a combination of favorable weather and the adoption of improved production practices. Increases in yields have more than offset reductions in the acreage planted to these crops. Any proposed solution to the surplus problem must deal especially with these products.

The United States now has not one but many farm programs. These have been developed and modified over a period of three decades or more. A number of programs, such as those relating to marketing services, research, education, credit, farm cooperatives, and soil conservation receive widespread support from both political parties and consumers as well as producers.

Conflict centers mainly around those designed to maintain or raise farm prices. Programs in this category include the price support loan and storage program which applies to some, but not all farm products; acreage controls which now apply only to wheat, cotton, tobacco, rice, and peanuts; surplus disposal activities including those designed to subsidize exports or to give away farm products either at home or abroad; land rental programs which provide funds for retiring cropland; and direct payments for sugar and wool.

Commodities which account for only about one-half the total cash receipts of farmers are now supported. The list of supported commodities includes most grains, cotton, tobacco, peanuts, soybeans, dry beans, butter, cheese, and dried skim milk. The non-supported list includes fruits and vegetables, eggs and poultry, hogs and beef.

No substantial changes have been made in the number of commodities supported during recent years. Support levels for nearly all commodities were reduced between 1956-57. A wide range of support levels exists at present.

Efforts have been made to reduce surplus production during recent years, first by enforcing acreage allotments on producers growing the major surplus commodities (in-

cluding corn until 1959), and second by offering rental payments to farmers who retire additional cropland under the soil bank program.

Production has continued to rise despite these two programs. Higher yields have offset most of the effect of reduced acreage. Moreover, on land taken out of wheat and cotton, grain sorghum, barley, and soybeans were planted, thus adding to the production of these crops.

While acreage control programs have not "solved" the surplus problem, they undoubtedly have helped to hold down increases in production of wheat, cotton, and rice. The soil bank has had a similar effect as farm output might have been even greater if additional land had not been retired under it.

Surplus disposal programs have expanded greatly during recent years due to the accumulation of large quantities of commodities in government storage. Congress has been generous in appropriating money for subsidizing exports and selling surplus commodities for foreign currencies. In addition, increased quantities of farm products have been made available through the school lunch program and to states for distribution to families on relief.

The Changing Family Farm

Stanley W. Warren
Department of Agricultural Economics

In the history of our country, no institution has been looked upon with greater favor than the "family farm." During the recent presidential campaign a leaflet entitled "Agricultural Policy for the New Frontier" was distributed by Mr. Kennedy. The following is quoted from page two of this leaflet:

"Likewise the assurance of a fair return to farmers must include a recognition of the importance of the family farm as an efficient unit of agricultural production, as an indispensable social unit of American rural life, and as the economic base for towns and cities in rural areas." There is nothing new in this statement. Anyone who expects to get votes in a rural area must endorse the family farm.

But, what is a family farm? Here we find some difference of opinion. Some say it is a farm where no labor is hired. Others would say that a family farm is one where most of the work is done by the farmer and his family. Still others would say that it is a farm where the manager has callouses on his hands. I have found the most useful concept to be that "a family farm is not large enough to justify one person spending most of his time on management rather than labor."

Using this definition, there are several kinds of family farms which might be described as follows:

SUBSISTENCE — These farms emphasize production for home use, selling only a small part of the total production. This was the family farm of pioneer days, with the spinning wheel in the cabin. This kind of family farm is history as far as

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Northeastern United States is concerned. And I am glad of that. One problem which subsistence farmers had was toothaches, and no money to pay a dentist.

RESIDENTIAL — These farms produce almost exclusively for home use, but the "farmer's" main job is something else such as construction work, law business, or teaching. This is a far cry from the pioneer's subsistence farm. It is a lot of fun for those who like it. There are many of these "farms" in New York State today. Their total contribution to the food supply is small, but they are becoming an "indispensable social unit of American rural life."

COMMERCIAL — The family commercial farm is where most of our food is produced. Emphasis is on production for sale. The commercial family farm may hire some labor, but not so much that the farm operator must spend a large part of his time in directing the workers.

PART-TIME—This is a combination residential farm and a commercial farm—a man with two jobs. A few people need two jobs, but most are finding one is enough.

Let's look at the family commercial farm. What has happened to it over the years? A study made by Cornell's Department of Agricultural Economics reveals changes in the family commercial farms of the Town of Dryden in Tompkins County since 1907. In 1907, the average family commercial farm in this town had 11 cows, an average equipment investment of $436 and an average total capital investment of $6400.

In 1957, the average for these items was 35 cows, $9650 equipment investment and $46,000 total capital. Had the family farm disappeared from Dryden. The answer is no. In 1907, the average labor force on the farms was the operator and nine months of other labor (family and hired). In 1957, the average labor force was the operator and 11 months of other labor. There was only two months difference in the average labor force.

This is also the picture nationally. In 1910, the total farm labor force in the United States was 13.6 million man equivalent. Seventy-five per cent of this labor force was the farmers and their families and 25 per cent was hired.

In 1960, the labor force on farms in the United States had declined to 7.1 million man equivalent. Seventy-three per cent of this labor force was the farmers and their families and 28 per cent was hired. This proportion of the farm labor force which is hired — about one-fourth—is a stable item in an unstable world.

In New York State the census counted 153,000 farms in 1940 and only 82,000 in 1959. In the United States the number of farms declined from 6,100,000 in 1940 to 3,700,000 in 1959. But, the labor force remains three-fourths "farmer and his family."

The amazing thing is that this reduced number of farmers supplies us with such an abundance of food that over-production is one of our worries. Of all the problems which man has had since he came down out of the trees, too much to eat is one of the nicest.

Why does our farming remain in family units, when most other business has gone into larger than family units? The answer is in the effect of mechanization on farming, and on other industries.

Once shoes were manufactured in family shops. The old-time shoemaker did the various jobs of making shoes in *sequence* and finally had the satisfaction of looking at a product which he had made himself. When machinery came along, shoe-making was divided into many jobs which could be done *simultaneously*. The number of jobs to be done at one time was far more than the number of workers in a family, and the family shoemaking shop disappeared.

In most of agriculture—for example potato growing—the mechanization of the job did not change the *sequence*. Mechanized potato farms must plant before they harvest. In mechanized potato growing the number of jobs to be done at one time is no more than in hand labor growing. So potato growing remains as compatible with the family labor force as before mechanization.

In some kinds of farming such as chick hatcheries, mechanization made it possible to do the various jobs *simultaneously* and the number of jobs to be done at once is beyond the number of workers in a family. Chick hatcheries are no longer family farms.

In most of agriculture planting must precede harvest, and the mechanized family farm is the most efficient food producing unit which the world has ever seen. It is the envy of most of the world.

Training Americans to Go Abroad

Kenneth L. Turk, Head Department of Animal Husbandry

THERE IS A growing interest today toward foreign service in agriculture by both faculty and students. This interest has increased rapidly during the past couple of decades, with larger numbers of scientists and technicians going abroad for various types of mutual assistance work with the emerging nations of the world. Thousands of students go abroad each summer; some even get college credit for travel study courses. Various types of student exchanges help to bring about better understanding between peoples of the United States and other countries.

The United States is striving to help peoples of the developing countries to increase their food supplies and improve their standards of living.

According to a recent report by the U.S. Committee on the University and World Affairs, about 50,000 foreign students and scholars are studying on American campuses and more than 15,000 U.S. students and faculty members went abroad last year to study, teach, do research, or assist foreign institutions. Sixty-eight U.S. universities are carrying out nearly 100 contracts under the International Cooperation Administration (ICA) in 33 countries, primarily to strengthen the educational foundations of the countries.

Cornell has a long history of close working relations in agriculture with other countries of the world. When I first came to the University as a graduate student 31 years ago, I soon learned about the Cornell-in-China program. Several Cornell professors went to China for teaching and research in agriculture. Many students from China and other far away places were coming to Cornell for training. More recently the Cornell-Los Banos ICA contract with the University of the Philippines has provided for exchange of many faculty members from the two universities,

IT'S GOOD BUSINESS TO DO BUSINESS WITH

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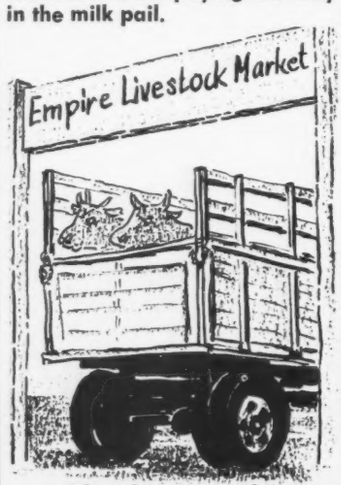
Extremely few cows culled in 1959-60 may cause glut in "cows for beef" market this year with lower prices as a result.

The time to cull that unprofitable cow from the herd is when she is not paying her way in the milk pail.



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and increasing numbers of Filipino students have come to Cornell.

We have a good record in sharing our staff and facilities with our friends around the world. We can do more in the future as we give greater attention to educational programs that will improve student training for foreign service in agriculture. Some shifts in education in the United States are needed to attract highly qualified persons for overseas work.

Frequently students and others ask me the questions, "How do I go about getting a job in foreign agricultural service? What are the opportunities? Do I need advanced degrees?" Certainly there must be evidence of good opportunities in foreign service in agriculture before we embark on intensive training programs. Those who wish to go abroad on a career basis want some assurance of the stability of the positions to which they are appointed. Also the positions must offer sufficient career opportunities to be attractive.

Perhaps the greatest opportunities for jobs now and in the years ahead are with the ICA, which administers our technical assistance programs under the U.S. State Department. Unfortunately, many of these assignments at present are of too short duration. Longer-term assignments will make these opportunities more attractive.

Several of the foundations such as the Rockefeller, Ford, and others, have extensive programs of research and education in many countries of the world, cooperative with the local governments and with the ministers of agriculture. The Food and Agriculture Organizations of the United Nations (FAO), as well as privately owned corporations and farms offer many opportunities for foreign service.

On an assignment in Latin America last year I met U.S. citizens who are college graduates in agriculture serving in the following jobs: owner and operator of a beef cattle ranch in Mexico; many ICA agricultural advisors in Colombia, Ecuador, Chile, and Brazil; manager of a group of large farms in Venezuela; supervisor of research for a private organization in Brazil; manager of a feed mill in Mexico; United States Agricultural Attaches in Argentina and Chile; about 30 research specialists in agricultural sciences with the Rockefeller Foundation in Mexico, Colombia, and Chile. These and many others illustrate just a few of the jobs now held by United States technicians and scientists in Latin America. The same situation applies throughout the world.

Recently you have been hearing about the Youth Peace Corps. This is a scheme to send young college graduates into underdeveloped countries of the world for personal aid in education, agricultural development, health, mechanical and engineering training. This program, if it develops, may be attractive to some students.

In general, there will probably be more opportunities in foreign service in agriculture for students with advanced degrees than for those with the B.S. degree. This is especially true of work with ICA, FAO, and the various foundations.

Those who will be working in any of the programs to aid agricultural development in the developing countries of the world must recognize that the qualities of personality, character, and leadership are essential. In working with the nationals of another country one must have a sincere interest in people, as well as the ability to get along with them. And it is highly important that one learn and appreciate the culture, customs, traditions, and philosophies of the people with whom he is to work. These are all fully as important, if not more so, than skill and training in agricultural technology and science.

Learning and using the language of the country in which one works is a "must" for a successful foreign service career. One must fully recognize his responsibility to help people help themselves.

Under a vast majority of conditions in low-income countries, intelligent, broadly educated generalists are likely to be more effective than highly trained specialists. They must be able to see the whole field of agriculture and be willing to lead the way by doing.

Educational programs in other countries must be integrated into the economic, social, and scientific structure of the country.

Our most satisfactory solutions are to help develop in the people of these countries the knowledge and skills they need to solve their own problems by growing their own food and devloping their agricultural industries. Investing in people of the emerging nations through education in its various forms certainly is one of the most effective procedures that can be used to provide long-time aid and good international relations. In the years immediately ahead there will be unprecedented opportunity for education to serve mankind everywhere.

Milk Quotas - Dairymen Must Choose

ETI

Leland Spencer
Department of
Agricultural
Economics

DAIRY farmers in the New York-New Jersey Milkshed and elsewhere in the nation are considering an important proposal. A national committee recently suggested a new plan for keeping milk production in closer adjustment to market demand. Whether this plan goes into effect or is merely put on the shelf will depend in large measure on how dairy farmers feel about it after they have considered the difficulties involved as well as the probable benefits.

Briefly, this plan would assign a base or quota to each producer, according to the quantity of milk he delivered in a recent period such as the last year. Then marketing certificates would be issued to producers by a designated agency, probably the U.S. Department of Agriculture.

Certificates given to each producer would entitle him to sell a given quantity of milk during the coming year, quarter or month at the full market price. In total the marketing certificates issued would equal the quantity of milk which the administrative agency thought could be sold at an "acceptable" price. Certificates would be allocated to producers in proportion to their established bases, say at the rate of 95 percent, 98 percent or 102 percent of base depending upon conditions at the time.

Any milk delivered by a producer in excess of the quantity represented by his certificates would be subject to an assessment at a uniform rate per 100 pounds throughout the country. The assessment rate would be set at a level considered high enough to discourage excess production. It might be as much as a dollar or more a hundredweight.

Dealers who receive milk from producers would be required to deduct the assessment and pay it over to the administrative agency. The funds collected in this way would be used to cover costs of administration and to help offset losses on surpluses that had to be disposed of by the government. The prices that farmers receive for excess milk would be reduced by the amount of the assessment.

The committee recommended that the bases and certificates not be tied to the farms or to the cows but that farmers and others be allowed to buy and sell them without restriction. Presumably the bases and certificates would have substantial value. If the assessment rate were $1.00 a hundredweight, the privilege of selling 100 pounds of milk daily for one year at the base price instead of the excess price would be worth nearly $365.

Certificates probably would be good for only one year but the bases might be given permanent status. In that case a daily base of one hundred-weight might be worth several times $365. Market prices for bases, especially in the early years, probably would be lower than the calculated value because of uncertainty about the future.

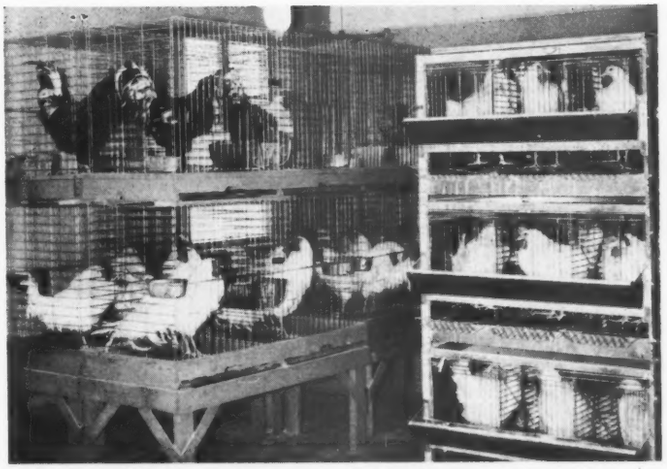
The Committee recommended that no attempt be made to reduce milk production below recent levels because this would be too difficult. They felt that it would be more practical to hold production about where it is while market demand increases along with population growth. In this way a gradual rise in dairy prices would be brought about. Quicker benefits to dairymen could be obtained by raising the level of dairy price supports while using the base-excess plan as a brake on production.

Another recommendation of the Committee was that the present national price program for dairy products, as well as the school lunch and other programs for expanding consumption of dairy products, be continued.

In recent years Uncle Sam has purchased huge quantities of butter, cheese and non-fat dry milk to prevent the farm price of milk from falling below specified minimums which dairy farmers consider too low to provide adequate incomes. Products thus acquired have been disposed of in non-commercial channels such as school lunches and in relief programs at home and abroad.

Annual surpluses disposed of in this way have been equivalent to about 2 percent to 8 percent of our total milk production in different years of the last decade. At higher support prices, the surpluses would of course be greater, especially so if no restraint on increased production such as the suggested base plan were used.

Dairy farmers naturally are reluctant to become involved in any program that has the appearance



These adult chickens are part of a research project now being conducted in the new poultry research building. The still unfinished research headquarters, located to the rear of Rice Hall, is to be used for research in poultry genetics, nutrition, physiology, and product development. The chickens above are being used in research on the preservatin of semen for artificial insemination of poultry. *Richard Mandell*

of limiting their traditional freedom to operate their businesses according to their own best judgment.

The suggested base plan would limit the farmer's freedom only by requiring him to either own certificates equal to his production or to accept a reduced price for milk delivered without certificates. One important effect of the plan would be to increase the amount of investment required of dairy farmers.

What dairy farmers are being asked to decide is whether they wish to accept this mild form of discipline in exchange for some improvement in dairy prices and incomes. By most standards, the incomes of dairy farmers are low—though perhaps not lower than the incomes of so many other important groups of farmers. Considering the requirements of the job, dairy farmers surely are not doing as well income-wise as industrial workers, business executives or professional people.

The outlook appears to be that milk supplies will continue to exceed the quantity that can be sold at satisfactory prices — unless the suggested base plan or some other effective method is used to help farmers gear their output to the needs of the market.

Fortunately dairy farmers have complete freedom to make the choice that lies before them. There is no indication that any organization or agency intends to push them into such a program unless they show a real desire to try it.

Freeing the World from Hunger

ETI

Richard Bradfield
Department of
Agronomy

IN THE foreseeable future, if mankind is to be well fed, he will have to feed largely upon the products of the soil and of the sea. If this be true, the products of the soil will have to be greatly increased.

The amount of increase required will vary with the increase in population. If the population of the world were kept constant for the next 25 years, our job of producing enough food for all would not be too difficult. In many countries, however, the rate of increase of population is already greater than the rate of increase of food supply.

In such situations, consideration of ways of at least slowing down the rate of population increase would seem wise. However, agriculturists have had more experience and, in general, more success in increasing food production than population experts have had in population control. For this reason, we may have to carry a major part of the responsibility for a better-fed world for the next 25 years.

There are two principal ways of increasing the food supply of the world: first, to increase the area of land under cultivation and, second, to increase the yield of crops on the land that is now being farmed.

It has been estimated that there are about one billion acres of land in the humid tropics and approximately 300 million acres of podzolic soils in the north temperate region which can be brought under cultivation. Of these, the tropical area would seem to have the greatest potential. This area is blessed with abundant sunshine, a growing season of 12 months each year, and generally plenty of water.

These very conditions which are so favorable for year around plant growth have, however, in many areas depleted the supply of plant nutrients, and left a residual surface soil which is acid and with a great capacity for fixing and thus reducing the effectiveness of phosphate fertilizer when it is introduced in commercial form. The problems of management of these soils are great. Differences about their value among soil scientists are very great; but the potentialities exist. The problem is largely that of finding solutions that are practical and economically feasible under prevailing conditions. This is one of the most important problems before the soil scientists of the world today.

In addition to the difficult technical problems, many very complicated human problems are also involved when farmers move from areas in which they have long experience into a new and strange environment. The potentialities for increased food production in the humid tropics are so great that all these problems must be solved. The surveys and basic research necessary as a foundation for developing economic systems of soil and crop management for these areas should be greatly expanded.

Let us now return to a consideration of possibilities for increased food production in the areas now under cultivation. For many obvious reasons, increased food production for the immediate future will probably have to come largely from such lands.

In most of the less developed countries, the primary food of the masses of the people is one or more of the cereals: rice, wheat, or corn. Such diets are commonly deficient in both protein and vitamins. The production of adequate amounts of fruits and vegetables to balance a cereal diet should not present many serious difficulties in most areas.

To provide the high quality protein needed is, however, a more serious problem. In the less developed countries, where these cereals have been growing under continuous culture without fertilizers for centuries, we find that their yields often fall to a level of about 8 to 12 bushels per acre in the case of corn and wheat and to 20 bushels in the case of rice.

The soils in these areas have simply become "worn out." But such soils are still capable of responding quickly and generously to good fertilizing treatment.

In countries with a limited number of soil scientists and a serious food problem, the work of the soil scientist should be focused primarily on the problems which seem to show great promise for increasing food production.

If we are to be free from hunger, each country will need men with goals like that of Lester Pfister, one of our leading hybrid seed corn producers. His ambition is to produce 200 bushels of corn per acre in 100 minutes of man labor. Such a farmer could produce enough in 5 minutes to feed one adult for one year! If each country which is short of food had a dozen such farmers to point the way, our goal would not seem so remote.

The above is an excerpt from the author's presidential address at the Seventh Congress of the International Society of Soil Science, held in August 1960 at Madison, Wisconsin.

Proud of its accomplishments but never resting on them!

EASTERN *Continues to lead the way in '61*

Eastern Milk Producers Cooperative is justly proud of what it's accomplished in 1960. Eastern led the fight . . . in raising support prices, in increasing school milk funds, and most important of all, in getting emergency price relief measures which eased the blow of falling prices to dairymen during the latter part of '60. These things and many more are a part of Eastern's record.

But Eastern will never be found resting on its laurels. Eastern Milk Producers realizes the seriousness of challenges facing the dairy farmer in 1961. Great issues are brewing—issues like combined orders, revamped provisions and supply management, to mention a few. And as always, Eastern has already acted . . . working hard, first, and fast in behalf of the dairy farmer.

EASTERN PLANS OBJECTIVES FOR THE FUTURE . . .

to obtain overall goals through a realistic program. Eastern's basic objectives Legislatively and Federal Order wise for 1961 are:

FEDERAL OBJECTIVES:

1. Oppose any tie of Class I prices to midwestern manufactured prices.
2. Oppose service charge assessed to bulk tank producers.
3. Urge an increase in the level of manufacturing milk prices.
4. Support individual producer opportunity to vote on specific amendments to the order. Cooperatives to vote its members in block that do not participate in the referendum.
5. Adopt such provisions that will restrict the movement of additional supplies of milk from coming into the New York pool.

STATE LEGISLATION:

1. Promote the adoption of such laws that will prevent destructive trade practices in the dairy industry.
2. Promote such legislation that will protect producers against possible losses as a result of failure of payment by handlers.
3. Urge legislation which will more effectively label imitation dairy products.
4. Establish such legislation which will empower the Division of Milk Control to more effectively control the sale of newly developed milk drinks.

NATIONAL LEGISLATION:

1. Oppose a national sanitation bill.
2. Support and urge the adoption of a bill to legalize the bargaining of cooperatives.
3. Urge national legislation that will provide to the producer a fair share of the consumer's dollar spent on milk.

EASTERN DOES NOT WAIT FOR THINGS TO HAPPEN...

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Eastern is presently tackling the way-too-low New York manufacturing milk price. On another front, Eastern sponsored seven educational debates on the controversial quota system question. These debates by two noted authorities gave farmers the opportunity to hear all the pros and cons of this vital issue. A poll conducted by Eastern, in connection with these debates, is now under detailed study. Just a sample of what Eastern has done and is doing in behalf of the farmer in '61.

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Soviets Back Up Their Farm Drive With Massive Propaganda

by R. Lyle Webster
Director of Information
U.S. Department of Agriculture

Reprinted from Foreign Agriculture

In the field of information, the Soviet Union supports its agricultural programs in much the same way as the United States does, but there are some big differences in content, approach, and intensity. Agricultural information as used by the Soviet Union is massive and all pervasive while in the United States it is selective and optional. Its purpose is to help achieve government production goals in contrast to U. S. programs which are pointed toward the achievement of individual progress. And furthermore, it is all government-controlled. This means that the Soviet government does all the things that in the United States are done by the Department of Agriculture, the land-grant colleges, and all the private media, such as the farm magazines, the newspapers, radio, and television.

These are the major observations of the U. S. Agricultural Information Exchange Team that went to the Soviet Union this past summer to study methods used in that country to disseminate information on results of agricultural research. A Soviet exchange team visited the United States in the autumn of 1960 for a similar study.

In the intensive drive to meet the production goals of the Seven Year Plan—a plan designed to catch up with or surpass the United States—the Soviet Union relies on agricultural information for two principal purposes: first, to disseminate research results as widely and rapidly as possible; and second, to encourage harder work and greater efficiency through recognition, incentive, competition, and rewards.

It is significant that the Soviets do not rely on orders alone to bring about the adoption of new methods. They readily admit that orders are not enough; that there must be understanding, enthusiasm, and acceptance of their programs if the desired agricultural goals are to be achieved. So they supplement the orders with the saturated use of propaganda to bring

about the greatest possible production by collective and farm workers.

Farm work groups and individuals are all engaged in constant competition. At the beginning of each year all farm workers take a "socialist obligation" to exceed their quotas or goals in the planned production; then they keep track during the year of how well they are meeting their obligation. In a dairy barn I saw detailed charts showing for each cow maid the amount of milk she obtained from the cows that she milked.

When a person does an outstanding job, he is recognized by having his photograph posted on the barn bulletin board, or perhaps in the nearby city.

He may be written up in the newspapers or mentioned on the radio. Sometimes the reward is a trip to the All-Union Exhibition in Moscow, the permanent exhibit of achievement of the Soviet economy.

Much of the responsibility for reaching the minds of the people rests with the Ministry of Culture, which has the task of producing educational and other motion pictures, for printing posters, agricultural books, textbooks, and the like. As members of an agricultural information team, we were most interested in the use of the various media.

Publications

The Russians publish a large number of professional journals and bulletins, leaflets, and brochures dealing with crops and animals. This takes place nationally in Moscow, and there is also extensive publishing in the 15 individual Republics which comprise the Soviet Union. In one office of the Ministry of Agriculture in Moscow, 34 separate agricultural journals are published. This is many more than are published in the U.S. Department of Agriculture, but it must be remembered that in the Soviet Union the government journals are all there are, while in the United States we have government periodicals but we also have a great variety of private farm magazines, agricultural journals of specialized kinds, and the like.

Press

Agriculture is an important topic in the newspapers in the Soviet Union, both nationally and locally. A daily newspaper called *Rural Life* is published in Moscow, with edi-

"Certified seed will double your harvest" reads the signboard above, which stands by a highway in the USSR. Signboards are widely used there, but they advertise government programs and purposes, rather than consumer goods. (Right) Soviet press gives much space to agriculture, including recognition of farm workers whose jobs have been outstanding. (Below) Bookstall in Krasnodar, one of the many in this and other Soviet cities.

Foreign Agricultural Service, USDA

tions in seven other cities, and it is distributed all over the Soviet Union. This newspaper is concerned largely with agricultural production and with the problems of people on the farms. In the provincial newspapers we found that from 30 to 70 percent of the space—and prominent space at that— was devoted to agriculture either in the form of how-to-do-it information or exhortations to the farm people to greater production, or in write-ups of outstanding individuals who had done exceptional work.

Books and Libraries

There is a large outpouring of agricultural books of all kinds. In Moscow, the State Publishing House for Agricultural Literature, which is part of the Ministry of Culture, specializes principally in the publication of textbooks, while the Ministry of Agriculture deals more with periodicals and publications.

We found many libraries and book stores. We were told that there normally would be a book store in each raion center, which corresponds roughly to a county seat in the United States. Also, every collective and state farm we visited had a modest library, and it appeared from inspecting borrowers' cards that fairly good use was made of them. Libraries usually had farm periodicals and newspapers.

Radio and Television

Radio reaches all farmers, either through individual sets or through individual speakers which are placed in farm homes and over which programs are "piped" from local radio centers or "knots." These wired sets, of which there are some 29 million, do not give the listener a choice of programs, except, of course, the choice of not listening. The radio fare typicaly consists of material from Moscow, from the capital of the local Republic and from local sources. Where the local language is other than Russian, which is the case in many places, the programs are partly in the native language and partly in Russian.

While radio is universal, television is less widespread, but growing. There are sets available for group watching on many of the farms. Where television is operating, agricultural programs get high priority in time.

Films, Posters, Exhibitions

Visual media are used intensively. Posters appear everywhere to encourage agricultural production, to advertise lectures, new publications, and books. Educational agricultural motion pictures are produced in large numbers, and every collective and state farm we visited had facilities for showing both educational and entertainment motion pictures on regular schedules. The Soviets have carried the permanent exhibition technique to a high level, with the most outstanding example being the All-Union Exhibition in Moscow. There are smaller exhibitions in some of the Republics, notably Kiev in the Ukrainian Republic.

Research

The content of the tremendous information activity carried on in the Soviet Union flows from the intensive research programs under way in all parts of the Union. Research is carried on widely at institutes and experiment stations to develop new varieties of crops, new and improved breeds of livestock,

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mechanization, and new methods of farm production. Once a new crop or breed has been tested, an official order is issued for either the whole country or the appropriate Republic or area. This order decrees the adoption of the new method or variety or breed, and the order sets forth, in great detail, what shall be done, when, and by whom.

To put research into practice as rapidly as possible, the Soviets use very large numbers of agricultural specialists. There are crop, livestock, engineering, and economic specialists in the Ministries of Agriculture, in the regional offices of agriculture within the Republics, in the raion or county offices, and even on the state and collective farms.

Agricultural educational institutions supply many of the needed specialists required to bring about increased production. A specialist in agriculture usually has 15 years of Russian schooling, as compared with the 16 years normally required for a college degree in the United States. Many specialists obtain their degrees through correspondence courses which are offered by the agricultural schools. One academy in Kiev reported 4,000 resident students in agriculture and 4,000 correspondence students. The correspondence courses require 6 years of study for a student to obtain a rating equivalent to a college degree.

There is a conscious effort to keep specialists, farm managers, and others in agriculture up to date on new developments. This is achieved through seminars, refresher courses in the winter, or one-day-a-week courses over a period of months. These are for specialists, farm managers, and even farm workers. We found an instance where 28 "cow maids," the girls in charge of dairy cows on a number of collective and state farms, were taking a course which the Russians, with an almost Madison Avenue touch, had labeled "the Cow Maids' University."

Russian agricultural officials have rather complete access to the press, radio, and television. Agricultural material is used by these media essentially as prepared by the agriculturalists. In the United States, editors and broadcasters pick and choose or even ignore government material submitted to them, but this does not appear to be the situation in the Soviet Union. The reason, of course, is that radio, television, and press are not outside organizations which receive government information, but are in fact a part of the government. The head of the All-Union or national radio and television committee, for example, is a member of the Council of Ministers and, thus, he participates in all major government policy decisions. In the United States a comparable situation would exist if all radio and television stations were in one government organization and if the head of the organization were a member of the Cabinet.

The Russians have adapted their operations to the different languages in the various Republics. They allow the native language to be used in the press, radio, and publications, but they also circulate materials in the Russian language, use Russian on the radio and television as well as the native tongue, and require that Russian be a second language in the schools. As a result of this policy, most people who are concerned with the administration of agriculture understand the Russian language.

In assessing what all this information activity in the Soviet Union adds up to, we reached the conclusion that the Union is engaged in a tremendous effort to apply results of research to their agriculture. Russians are doing the same thing that we in the United States are doing. They are striving to develop and plant better seeds and to breed up their livestock for more efficient production, they are mechanizing their operations, and they are studying the economics of what they are doing. In the United States we say this is the way to farm better. Apparently the Russians believe us.

Foreign Agricultural Service, USDA

Lyle Webster (above, right) and director of Soviet experiment station near Krasnodar, study wall chart designed to spread research information. Highway posters (right) show progress the Soviet Union has made in the production of oil-bearing seeds, and cites the goal for 1965.

Mr. Webster was chairman of the U.S. Agricultural Information Exchange Team that spent a month in the Soviet Union in 1960.

You Wear Your Ego

The psychological effects of clothing on the individual have long been of interest to many. When a woman who is depressed buys a new hat she feels relieved and happy again. Why? Mrs. Mary S. Ryan, clothing psychologist, gives some of the answers.

by Carole J. Wedner '61

THE woman is supposed to be relieved of her depression by a new hat; the designer of ski clothes states that his skiing outfits make better skiers; in an advertisement we read that a child's self-confidence is developed by the proper selection of clothing."

Mrs. Mary S. Ryan of the textiles and clothing department bases much of her research on this philosophy. Mrs. Ryan has been in this field since 1948. She was the first person taken into the TC department from the field of psychology. To this day the Home Ec. College of Cornell University is still the only educational institution with a clothing psychologist.

During her time at Cornell, Mrs. Ryan has conducted many studies on all phases of clothing psychology. Her chief subjects at first were college girls. These studies, conducted several years ago, tried to establish the effect of clothing on these girls.

A summer sheath of flowered print. This tailored dress with a slim skirt would make some women feel sophisticated and glamorous, others would feel conspicuous and awkward.

National Cotton Council

Color, texture, and type of clothing have their effect on everyone. Mood and action were found to range from gay and perky, to sophisticated, to self-conscious, to depressed, to glamorous.

Glamour is induced for many girls by taffeta satin, and other rich fabrics. It is also produced by low cut gowns.

Dressy fabrics also make some girls feel "feminine, dreamy, and graceful." One girl said, "My white net strapless formal makes me feel like a princess."

"Heels lead to almost a different vocabulary than loafers." said another girl who felt sophisticated in dressy clothes, dark clothes, and black. In contrast to this coed, another was "depressed" by dark wool and gabardine. One coed felt "rather drab" in brown and "uninteresting in skirts and sweaters worn on campus"

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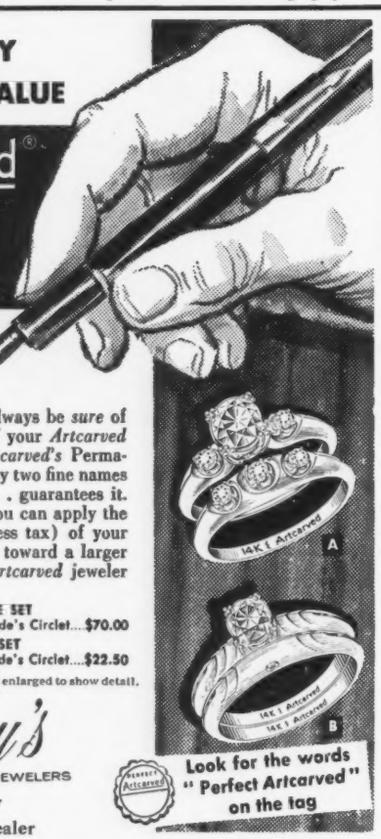

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The mood most often created by clothes was gaiety. This was induced by red, bright colors, taffeta, and silk.

Many girls prefer slacks, old or informal clothes, and rough textures. These give some girls a feeling of poise, ease, and confidence. "When I wear tweed or rough woolens I feel free and easy-going," claimed one girl, and another coed expressed the same sentiments about blue jeans.

Personality Types

In one study the girls were first asked to give themselves a personality type and then to describe their favorite type of clothing. Those who described themselves as the "active, country girls" selected tailored or sports clothes and rejected with vigor frills and formal clothes.

Serious-minded girls prefer suits and simple lines and also reject frills and laces.

The conservative girl likes "casual sports clothes of conservative cut and soft colors."

Feminine Frills

In contrast to these girls the "feminine" girls prefer frills, lace, jewelry, and dislike tailored and sports clothes. Bright colors and "anything different" were preferred by those who called themselves "artistic."

A group of coeds were asked to describe two dresses in their wardrobes—one which they liked and in which they felt well dressed and one in which they never felt they looked their best. This was done for the effect of such clothes on the girls' actions and feelings. Becomingness, color, and fit were most often cited as the reasons for wearing these garments.

Simple But Elegant

"The dress which I feel best in," said one coed, "is a changeable taffeta with a small figure. It is fairly tailored with a collar and buttons and unpressed pleats. The style makes it simple enough to wear anywhere and the rich material makes it dressy enough to wear anywhere."

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These girls were also asked to contrast two similar occasions where they felt there was a great contrast in their appearance. They were then asked if their mood or actions were affected by their appearance. Over 80 percent of the girls felt that there had been a difference.

Results of Dressing Well

"A girl who feels that it is important to look well because people will judge her on her looks," found Mrs. Ryan, "or because she will be accepted into the group because of her appearance, is more likely to be affected in her mood and actions than is the girl who wants to be well-dressed because she feels it is her responsibility to her date or to her family, or who wants to dress well for aesthetic reasons."

A casual sports outfit like this puts many girls at ease, makes them feel natural and poised.

National Cotton Council

Those girls who felt well-dressed on specific occasions found themselves friendlier, extroverted, and more interesting, while they felt ill-at-ease, worried, nervous, and embarassed when they did not feel well-dressed.

Moods of Color

There's a reason, expresses Mrs. Ryan, for the influence of different clothing types. "A particular color or texture probably influences the mood of an individual because it has become associated in the past with that mood, or with some individual, object, or event suggesting it." Black is a good example of this. It made most girls feel older and more sophisticated. Perhaps this is because they have "seen older and sophisticated women wearing black and have seen black used in magazine illustrations for that type of woman."

"The reason clothing is important is because someone sees it," says Mrs. Ryan. "There is never a point where you don't find a relationship between clothing and humans. After all, each situation, contains interacting humans and they're dressed."

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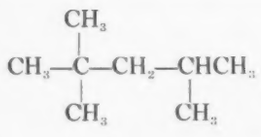

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Dairy Marketing and the College of Agriculture

A College of Agriculture alumnus explains the relationship between the College and New York State's most important agricultural industry.

by Dr. Charles Blanford '35
Milk Market Administrator

PRODUCTION and marketing of milk continues to be the most important single agricultural industry in New York State. Perhaps no other single industry is so vital to the economic health of the state.

In recognition of this fact, several years ago both the State of New York and the Federal government enacted legislation to regulate certain economic aspects of milk marketing. Based on this legislation are the milk marketing orders.

The College's Role

Since 1942 the writer has been the administrator of the orders for the Metropolitan New York City area. In 1957 this regulation was extended to cover a large part of Northern New Jersey and much of upstate New York. Throughout this time, representatives of the New York State College of Agriculture made an invaluable contribution to the development of the regulatory program.

The administrator, the assistant administrator, and several members of the administrator's staff have had either undergraduate or graduate training at the College of Agriculture. At most public hearings involving the marketing orders some member of the teaching and research staff at the College of Agriculture has appeared as an expert witness. Many of the major provisions of the market order regulation have been developed by persons associated with the College.

In addition, the four major cooperative groups of dairy farmers, who are charged under the order regulations with the responsibility of representing the interests of all dairy farmers in the milkshed, have relied heavily on the College of Agriculture for trained personnel. They also frequently seek the advice of College personnel in the development and presentation of their marketing programs.

Several graduates of the College also hold responsible positions with the State and Federal agencies charged with the supervision of the milk marketing orders.

Several persons in the dairy industry some years ago recognized the important contribution of the College of Agriculture in the dairy marketing field, establishing the Dairy Marketing Research Fund. Part of that fund has been set aside to endow a scholarship grant each year to an advanced student in the College who has shown an interest in some phase of dairy marketing. Several past recipients of this scholarship grant have graduated from the College of Agriculture and are now working in the field of dairy marketing.

Marketing Research

At the present time also, research projects are being cooperatively sponsored by the Market Administrator and the Department of Agricultural Economics. In addition, a research project to determine the specific gravity of milk and milk products is being sponsored with the Department of Dairy and Food Science.

Four employees of the Market Administrator's office are doing research work at the College of Agriculture in preparation for graduate degrees. These persons in addition to receiving valuable training are each conducting research on problems related to the marketing of milk.

The results of this research become available not only for use in establishing better marketing systems and regulatory programs, but for the teaching of dairy marketing at the College.

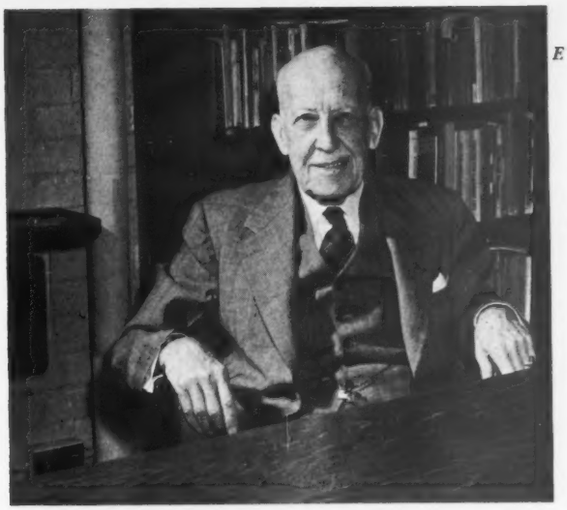
Teaching Dairy Marketing

It is through the teaching of dairy marketing that most undergraduate students come in contact with the economics of dairy marketing. Here, every student in the College of Agriculture has an opportunity to learn about the marketing system for milk in New York. This can be of great value to him. If he becomes a dairy farmer he can use this information in his own business. Of even greater importance, however, is this knowledge as he assumes responsibility for action and eventual leadership in his cooperative organization. If he enters agricultural business, it is a necessity that he know the marketing system for milk. If he enters vocational agriculture teaching or Extension Service work he will be prepared to work with dairy farmers and dairy farm organization leaders. Any person who intends to be associated with New York State agriculture will find knowledge of the marketing of milk most helpful in the pursuit of his work.

Tribute to Spencer

Any review of dairy marketing at the College of Agriculture would not be complete without recognition of the contribution made by Dr. Leland Spencer, Professor of Dairy Marketing. For more than thirty years he has taught, advised, and directed more students of dairy marketing than any other person.

New York State, with its economic dependence on the production and marketing of milk and dairy products has been fortunate to have had at the College of Agriculture a continuing program of research and teaching in the field of Dairy Marketing. It has been doubly fortunate to have the program under the guidance and direction of so able a person as Dr. Leland Spencer.



ETI

by James A. Sample '63

CORNELLIANS RECALL B. A.

RETIRE? WELL, YES, it's true that I am finishing 31 rebellious years at Cornell," rumbled Professor Bristow Adams, as he fished in his pocket for a match to light his cigar for the seventh time. "In '43, when I was supposed to retire, I felt reluctant to leave—now, I'm sort of anxious to get on with my painting, to see if I'm any good."

Professor Adams, commonly called "B.A." by his friends, showed a marked artistic ability in high school, even though writing later became his outstanding field. Upon graduation he studied at the Spring Garden Institute in Philadelphia and Corcoran Art School in Washington. He later enrolled at Stanford University and graduated in 1900. While at Stanford, he ran track. He had a mustache which made him look like Robert Louis Stevenson, and at track meets the people in the stands would yell, "Go Gramps, We're betting on you!"

"B.A." had a definite flair for writing even before he went to Stanford and was one of the co-founders of the *Pathfinder,* a weekly news review, at age 17.

Besides being editor of the Stanford literary magazine and managing editor of the daily newspaper, he later founded the *Stanford Chaparral,* the first college comic in the west. Once, he wrote an article which concerned several school officials. Some friends of Luella Farmer, later Mrs. Adams, ran up to her and cried, "Oh Luella, they are going to expel Bristow!" Luella said in a casual manner, "Oh no they won't. If anybody knows what the people want, it will be Bristow." He didn't get expelled.

After graduating, he became a free-lance writer and illustrator. In 1902, he returned to Washington, D. C., helped form a publishing company, and edited the *American Spectator.* He then became the associate editor of *Forestry and Irrigation,* which brought him into association with the United States Department of Agriculture Forest Service.

In 1914, according to Mrs. Adams, he was traveling around the West with the Forestry Service when a telegram four weeks old caught up with him. The message had been forwarded so much from one place

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to another that there were $8 charges on it. "I felt that no telegram four weeks old was worth $8 to me, so I refused it," said "B.A."

He later discovered that the wire was from Cornell offering him the post of publication and information director in the College of Agriculture. He still had time to accept, and "I have never regretted it," Professor Adams said.

To him, the purpose of the extension bulletins and the use of the press was a way to acquaint farmers with scientific research in an understandable form. Professor Adams believed that simple English was a must when acquainting farmers with a scientific discovery.

One of Bristow Adams' first contributions to the profession was to establish the agricultural editor as a "service man." At the American Association of Agricultural College Editors in Wisconsin in 1915, he said, "The best form of publicity in connection with extension work is that which is furthest from the generally accepted use of that word. Truth which will aid the reader carries its own validity."

He always insisted on news as opposed to publicity. To him, real news was a service to the paper, as well as to the reader, and he would not tolerate what he called "puff stuff."

Professor Adams was one of the first college editors to see value in training schools. For years, he conducted numerous training schools for home demonstration and other groups. He collaborated with weekly newspaper editors in the surrounding areas in countless news writing sessions which he conducted in his humorous and interesting way. "B.A." was once asked if these meetings did any good and he replied, "Well, for a while at least they wrote on only one side of the paper."

By traveling extensively, he observed agricultural practices in many countries, and through numerous speeches he shared these experiences with audiences throughout New York State. "I could listen to you all night long," one man told him after a dinner meeting. The subject, a 12-course dinner served on a tramp steamer, "B.A.'s" favorite means of travel.

In spite of his busy life, Adams found time to give two or three commencement speeches a month. He says, "I still can't fathom how I ever became a commencement speaker, as I played hookey in school on declamation day, flunked a course in forensics at Stanford, and never gave a public talk until I was 40."

For over 18 years, he had a weekly broadcast, "Let's Read a Book," on the Cornell radio station. An Ithaca resident once commented, "Missing B.A. on Saturday would be like missing my breakfast."

Being only human, "B.A." had a tendency to "put things off" 'til the last minute. One of his co-workers recalls staying up all night to prepare for a meeting on campus. They had breakfast at a beanery at five a.m., and were in time for the opening session at nine.

He was quite interested in extra-curricular activities, and he was a member of the Board of Directors for the *Cornell Daily Sun,* an unofficial advisor of the *CORNELL COUNTRYMAN,* and a member of the Board of Managers of Willard Straight Hall.

For 25 years, he was faculty advisor for track athletics. Robert J. Kane, Director of Athletics, commented, ". . . A head referee of Cornell track meets for over 30 years, he was a suave and elegant trademark in his indoor costume of top hat and tails, and the outdoor uniform of snowwhite flannels, panama hat, and navy blue sport coat — impeccable always."

Best known on the Cornell campus for their Monday night open-house for students, Professor Adams and his wife felt that students needed a place where they might hold informal discussions. Over the fireplace in the Adams' home is the inscription, "The time has come, the Walrous said, to talk of many things."

In 1939, when Adams was 64, he said, "I have no desire to retire; I am not looking forward to it. I enjoy the work with the students." Even after his retirement in 1945, he was a member of the administrative committee of the *Cornell Plantations* and editor of its quarterly publication.

Upon his death on November 19, 1957, at age 82, President Deane W. Malott of Cornell University said, "Bristow Adams was one of those commanding figures whose presence helps create the stature of a great university. . . "B. A." was always approachable, especially by the students he so loved and respected; he was always articulate in behalf of his adopted alma mater; the passage of years never hindered his heartwarming youthfulness."

"It can never be commonplace to say of Bristow Adams that he will be remembered."

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47th Annual

"Little International"

April 29, 1961

Dairy winners proudly display their awards

The forty-seventh annual "Little International," sponsored by the Cornell Round-Up Club will be held on April 29, 1961, in the Judging Pavilion. Showing will begin at 12:00 noon in all classes of livestock — Beef, Dairy, Sheep, and Swine. Students of Cornell will compete for over $200 in prizes and awards. All interested are cordially invited to attend.

CORNELL ROUND-UP CLUB

Gordon Thomson—Show Superintendent

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The "Super" in Our Supermarkets

SUPER-human effort by food distributors and processors has moved a SUPER abundance of commodities through our marketing channels.

by Len Kallerges, Grad '61

Prof. Wendell Earle (third from left, front row) conducts field trips to retail stores for his food distribution students. This "first-hand-view" education is part of Cornell's program to narrow the gap between the available supply of trained men and the needs of the food distribution industry.

TAKE A SHORT walk through a supermarket . . . any supermarket. There, you might find ham from Holland, lettuce from California, steak from Kansas, oranges from Florida, and apples, eggs, milk, and canned peas from New York.

To do this gigantic job of assembling and retailing takes the concerted efforts of millions of workers in food processing and distribution. Their function is vital. They are dealing with products for which the average family spends a quarter of its budget totaling over $50 billion yearly.

Efficient Food Stores

"The efficient operation of food stores", says professor of marketing Dr. Wendell Earle, "affects the lives of everyone, including consumers, wholesalers, processors, and producers." Efficient food store operation helps consumers by providing the products and services they want in a convenient form, at low cost.

Producers benefit through lowered distribution costs, and larger markets. Retailers, processors, and wholesalers benefit through adequate returns on their investment and labor.

Efficient food stores and the intricate channels that bring food from producers to consumers are also being studied at Cornell. In recent years, Dr. Earle reports, Cornell has put more and more emphasis on the retail part of marketing.

For example, one of the problems now being worked out at Cornell is the development and promotion of the "Bird Dog," a product similar to a hot dog, but made from poultry meat. The developers of the "Bird Dog", Professors R.C. Baker and L.B. Darrah, say that "This product will, in addition to increasing the variety of poultry meat products available to the consumer, also increase the alternative use of poultry products."

Another interesting development is a new type of apple crate that will be packed in the field and be immediately adaptable for retail store display. Its conceiver, Professor Max E. Brunk, explains that "This would result in lower handling and packing costs by the grower. In addition, the retailer would benefit by decreasing the labor necessary to prepare the apples for display."

New York State is the nation's second largest apple producer, and the nation's most populated state. A major change in the marketing efficiency of apples is of great concern to the state's apple producers.

Management practices in food distribution are also of concern to the industry. A recent nation-wide survey by Professors Wendell Earle and Neal M. Gold shows that although 95 percent of the retail food concerns believe management development is necessary, only one-fourth have established programs to train new managers.

Food Distribution Program

Cornell recognizes the need for trained personnel in 1958 when it set up the Food Distribution Program under Professor Wendell Earle. He says "The need of the food industry for well trained men with ability and vision continues to increase faster than ever before."

By offering college training in the food distribution area to undergraduate and graduate students, and special students, Cornell hopes to narrow the gap between the available supply of trained men and the needs of the industry.

Extension Program

Another step towards increased marketing efficiency is the establishment of an extension program in food distribution under Professor Leland E. Ott. Its purpose is to provide current information on the latest research findings and managerial practices for food chains, wholesalers, and independent supermarkets. The U.S. Department of Agriculture has this to say about "Extension" work in food distribution. "Extension has long worked with wholesale and retail food firms. The objectives of this work have included the following: better maintenance in quality of agricultural products, increased operational efficiency of marketing firms, improved marketing practices of farmers, and the development and expansion of the market for agricultural products.

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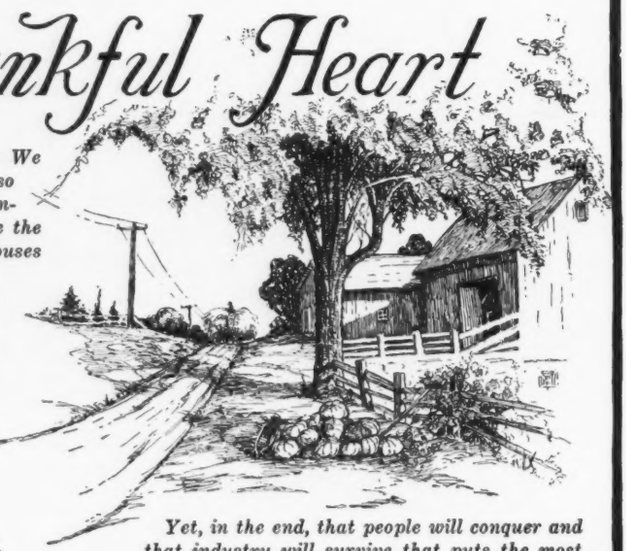
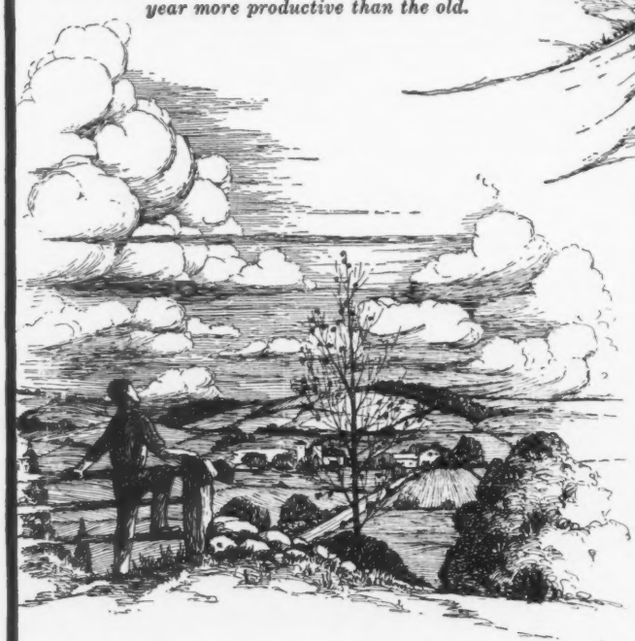
Home Demonstration-253 M.V.R.
Agriculture-212 Roberts Hall
4-H Club-242 Roberts Hall

The Thankful Heart

FULL of pride are we in our abounding crops. We are almost boastful that we can produce so great quantity, and that the nation can inventory so much wealth thereby. It is good to see the granaries full, the bins bursting, the storehouses laden and the barns packed to the beams. We read the figures with much satisfaction. We attain to mastery and we express our power. It is our high ambition to make every new year more productive than the old.

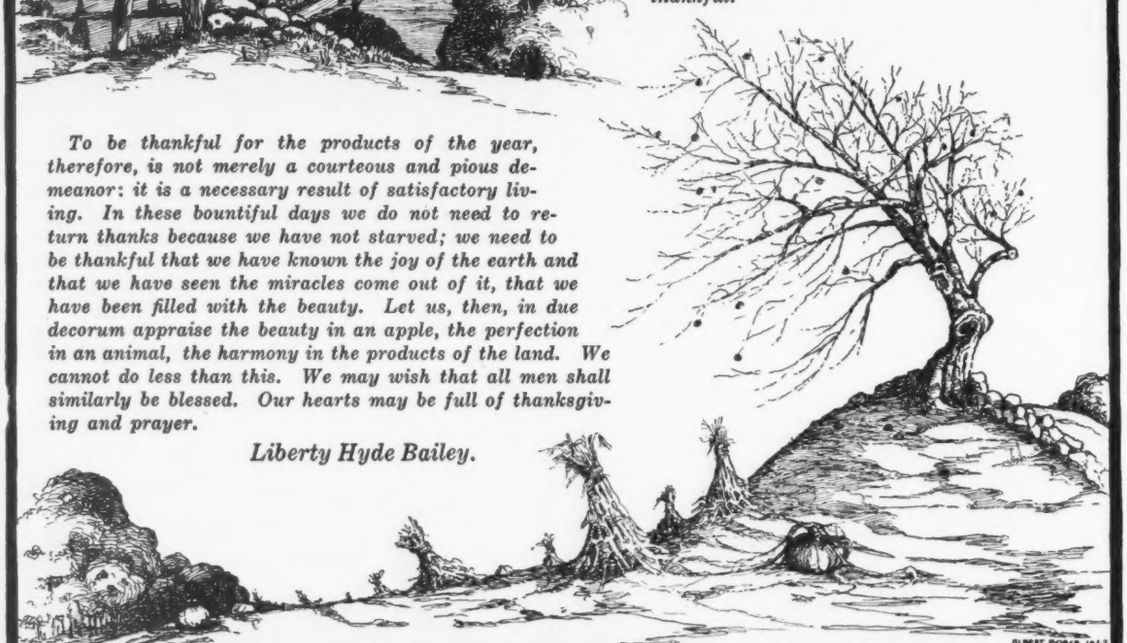




Yet, in the end, that people will conquer and that industry will survive that puts the most art and feeling into its efforts and its products, and the mechanical quantity-production, no matter how honest and "efficient", will fall into subordinate place. The quality of the product is verily more important than its quantity, because it expresses the soul of the producer; and even in a commercial age, the spirit will hold the leadership. To be keen in the appreciation of the beauty in the product is to exercise the highest privilege of any craftsman, whether farmer or artisan; and if one sees the beauty, one perforce is thankful.

To be thankful for the products of the year, therefore, is not merely a courteous and pious demeanor: it is a necessary result of satisfactory living. In these bountiful days we do not need to return thanks because we have not starved; we need to be thankful that we have known the joy of the earth and that we have seen the miracles come out of it, that we have been filled with the beauty. Let us, then, in due decorum appraise the beauty in an apple, the perfection in an animal, the harmony in the products of the land. We cannot do less than this. We may wish that all men shall similarly be blessed. Our hearts may be full of thanksgiving and prayer.

Liberty Hyde Bailey.



Editorial

Eastman Stagers' Golden Year

IN this special Ag Progress Days edition we have explored some of the "Great Issues in Agriculture." These issues may be new in this generation but problems of some kind have always existed in agriculture.

Agricultural issues, or the demands they put on the people facing them, were part of the cause for an institution that was born in the early days of Farmers' Week, lived through Farm and Home Week, and is celebrating its Golden Anniversary this year during Cornell's Agricultural Progress Days.

The institution is the Eastman Stage in Public Speaking.

Prof. G. Eric Peabody has been associated with the Stage since its beginning. He explains that the namesake, Waterville, New York banker A. R. Eastman, first became interested in such a public speaking contest while attending a meeting of eastern New York hops growers in the early 1900's.

After the meeting, Mr. Eastman expressed concern to Dean Liberty Hyde Bailey with the unwillingness of many farmers at this meeting to speak publicly. They certainly had something important to say, but seemed to lack confidence. Eastman was especially concerned with seeing this trait in ag college students.

The 1961 Eastman Stage contestants. Front row, from left to right: Harold H. Miller '61, Abigail A. Stimson '61, Joan E. Hitt '61, and George E. Agle '62. Second row, left to right: Gordon L. Peck 62, Jon E. MacDonald '61, alternate, and Paul A. Knapp '62. *Photo Science*

Mr. Eastman was familiar with the "Agricultural Stage," a small speaking contest held during Farmers' Week. He felt that a public speaking event like this could inspire ag students to develop confidence and leadership qualities. In 1910 Eastman donated money for prizes in the form of Liberty Bonds. The late V. J. Frost, '10, won the first prize in the first Eastman Stage on February 11, 1910.

A public speaking stage, felt Mr. A. R. Eastman, would give confidence and leadership qualities to participants. To test the results, questionnaires were sent this year to 250 past "Eastman Stagers." Professor Peabody, a past "Stager" himself, says the returns show Eastman "alums" in top positions, in all walks of life, from all over the country.

The goals of the Eastman Stage—confidence and leadership—were never more needed than they are today. We salute the Eastman Stagers in their Golden Year.

Farewells, Accolades and Announcements

THE March issue is the last one for this writer. For their time and effort in putting out the magazine, I want to thank the most important part of the editorial "we" — the staff; the guidance behind the "we" — the Board of Directors; and the reason for the "we" — the readers.

I am looking forward to seeing the work of the newly elected editors and managers: Editor-in-chief, Jane Brody, '62; Managing Editor, Ernest Smith, '64; Associate Editors, Jane Doyle, '62, and Linda Goldreich, '64; Circulation Manager, Ralph Schoemann, '63; Home Ec Editor, Hillary Brown, '63; Photography Editor, Richard Mandell, '64; Secretary, Suzy Gubin, '63; Ag-Dom Representative, W. Stephen Middaugh, '62; and Zilch, '00.

The *Countryman* takes great pleasure in announcing the winners of the Paul H. Guldin Memorial awards for the fall term: First prize, Robert Gambino, '61; second prize, Gerald Kral, '62; and third prize, Edward Razinsky, '61. The honorable mentions were: Jane Brody and Jane Doyle, both '62; and Linda Goldreich, '64.

Fraternities! ***Sororities!***

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From the College Press

● WINTER OAT RESEARCH – Prof. E. J. Kinbacher is working on two projects which promise to speed up research and hasten the development of a winter oat suitable for growth in New York State.

● GREENHOUSE AND NURSERY CROP BUSINESS–at least one group of agricultural products has no surplus, says Prof. John Seeley. The products: trees, shrubs, and all types of garden plants.

● THAILAND STUDY – Evidence gathered in a College of Home Economics study in Bang Chan, Thailand, may point the way toward better health for future generations of rural Thai.

● CELLS HELP INSECT RESISTANCE – New knowledge of the ways insects adapt to phosphate insecticides has been uncovered by Prof. Robert Patton. His discovery may lead to improved insect control.

● TURKEYS – Many turkeys aren't being well enough fed, Prof. Milton Scott said in a speech at the British Turkey Federation meeting in Harrogate, England.

● STRAWBERRY DISEASE – Summer wilt has caused such a high death rate to plants in some strawberry areas that Cornell researchers teamed up to find a cure. Their findings to date: certain strawberry varieties are more resistant than others.

● EXHIBIT IN EGYPT – An exhibit built for Cornell's 1960 Farm and Home Week has been selected for presentation at the International Agricultural Exhibition in Cairo.

● CRICKET RESEARCH – In an effort to find out how men will react to life without day and night, graduate student Joseph Nowosielski has been exposing crickets to varying periods of light and darkness. The crickets continue day and night activities even when they're exposed to continuous artificial light.

● NEW EGG CARTON – If a three-month market test now being conducted in Syracuse supermarkets pays off, consumers will soon be able to buy their eggs in an all-new carton, which keeps eggs cleaner and fresher than ever.

For further information on any of the above items write to the Cornell Countryman.

THE DAIRYMEN'S LEAGUE...

Oldest, Largest, Most Influential Marketing and Bargaining Cooperative in the Milkshed

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It is League bargaining backed by League facts, figures and facilities that give all dairymen a better deal in the marketplace.

It is League marketing outlets, backed by League manufacturing facilities that make cooperative market-guarantees really mean what they say . . . especially in times when overproduction and distress milk disturb normal marketing operations.

The members of this oldest and largest milkshed cooperative are proud to join with their milkshed neighbors in applauding the New York State College of Agriculture for its salute to an advancing agriculture in this Progress Days celebration.

DAIRYMEN'S LEAGUE COOPERATIVE ASSOCIATION, INC.

LINK-BELT drive and conveyor chains

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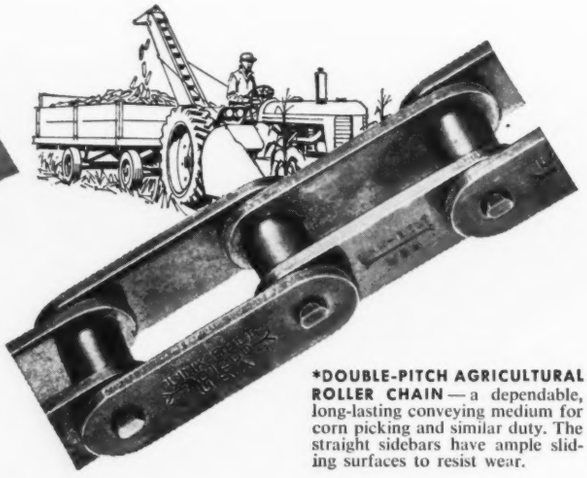
Over 300 quality-conscious farm machine manufacturers rely on Link-Belt for chain . . . and bonus services besides

There's good reason why so many farm equipment manufacturers choose Link-Belt chain. Experience has shown them that the refinements built into Link-Belt chain make a vast difference in field performance, help assure customer satisfaction for their machines.

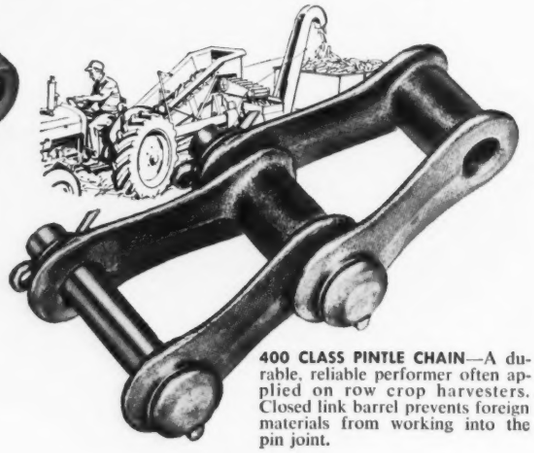
Link-Belt offers industry's most complete line of drive and conveyor chains, chain attachments and sprockets. Also "bonus" services: application counsel, field analysis, laboratory service and others. These services multiply the *value* of Link-Belt chains, *but not the price!*

***STANDARD-PITCH PRECISION STEEL ROLLER CHAIN** — a popular choice for transmitting power on such equipment as self-propelled combines. Features high hp capacity and light weight.



***DOUBLE-PITCH AGRICULTURAL ROLLER CHAIN** — a dependable, long-lasting conveying medium for corn picking and similar duty. The straight sidebars have ample sliding surfaces to resist wear.

STEEL LINK-BELT CHAIN — brings low-cost efficiency to conveying. Special hook design provides added bearing area for added life—also prevents accidental uncoupling.



400 CLASS PINTLE CHAIN—A durable, reliable performer often applied on row crop harvesters. Closed link barrel prevents foreign materials from working into the pin joint.

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